SMITHSONIAN
INSTITUTION
LIBRARIES

From the Library of

E. YALE DAWSON

251—

Bot

MEMOIR

OF

W. H. HARVEY, M.D., F.R.S.,

ETC., ETC.

LONDON: PRINTED BY WILLIAM CLOWES AND SONS, STAMFORD STREET AND CHARING CROSS.

Yours ever affy
E. L. Macoy

MEMOIR

OF

W. H. HARVEY, M.D., F.R.S.,

ETC., ETC.

LATE PROFESSOR OF BOTANY, TRINITY COLLEGE, DUBLIN.

WITH SELECTIONS FROM HIS JOURNAL AND CORRESPONDENCE.

All things here show him heaven; *waters* that fall
Chide, and fly up; *mists* of corruptest foam
Quit their first beds and mount; trees, herbs, flowers all
Strive upwards still, and point him the way home.

HENRY VAUGHAN.

LONDON:
BELL AND DALDY, YORK STREET, COVENT GARDEN.
1869.

QK
31
H3A3X
1869
BOT

TO

FLEETWOOD CHURCHILL, Esq., M.D.,

PRESIDENT OF THE KING'S AND QUEEN'S COLLEGE OF PHYSICIANS, ETC., ETC.,

IN TOKEN

OF THE WARM REGARD ENTERTAINED FOR HIM

BY DOCTOR HARVEY,

THIS VOLUME IS RESPECTFULLY DEDICATED BY

THE EDITOR.

JUN 10 1999
LIBRARIES

dated by Harvey's Cousin
Mrs Lydia Fischer
annotation in Kew Copy

PREFACE.

The following Memoir was originally intended for Dr. Harvey's personal friends only; but the number of these was so large, he was himself so universally beloved, and his character—as exhibited in his letters—so peculiar, and in many ways so interesting to the ordinary student of biography, that it has been decided to publish it.

A place among the great scientific theorists of his age cannot be claimed for Dr. Harvey. His fame as a Naturalist rests mainly upon his conscientious labours in that vast field of description and classification in which he was from first to last—from the first dawn of his genius in his happy schoolboy days to its premature setting—so enthusiastic and indefatigable a worker Here his marvellous accuracy and minuteness of observation, and exquisite delineation of the objects which came under his untiring eye and hand, can only be appreciated by the earnest student of Nature who goes with him over the same ground in the same spirit.

His character, as a Botanist thoroughly devoted to his vocation, and thoroughly impressed with a sense of the divine beauty and magnificence exhibited in the lowliest seaweed, can only be fully seen in his letters to his most intimate friends. In these we get into the very heart of the man himself; a man of whom it might be said with the fullest truth:—

> "To him the meanest flower that blows could give
> Thoughts that did often lie too deep for tears."

With these private letters, which may be truly called *autobiographic*, the Memoir is therefore almost entirely occupied; the

few gaps in the series being filled up with brief notes of explanation by the Editor. The mass of his correspondence with his illustrious brethren—the Hookers, Agardh, Agassiz, Darwin, &c., &c.—has been for various reasons omitted. It was not deemed expedient to break the chain of these strictly autobiographic letters by others which, however interesting to those concerned with the minutiæ of descriptive botany, could scarcely be expected to interest the general public.

As a piece of biography, the Memoir is valuable chiefly as the record of a life thoroughly consistent to the end—and a remarkable life too; for in Dr. Harvey were united a positivist's zeal for truths of fact with an enthusiastic faith which had in it something mystical. Exactly what he determined in youth to accomplish he accomplished; the work which he took upon himself to do he did, honestly and thoroughly; the fame which he desired to achieve he achieved. In life he was strengthened in every difficulty and trial by a trust in an overruling Providence, which never faltered and never betrayed him; in death sustained by a Christian fortitude, which remained calm and firm until death was "swallowed up in victory."

In the churchyard at Torquay, where he himself desired to be buried, beneath the plain marble slab which bears the name of William Henry Harvey, repose the mortal remains of a good man and a great Naturalist.

"'Tis well; 'tis something; we may stand
Where he in English earth is laid,
And from his ashes may be made
The violet of his native land."

LETTERS.

PAGE

To Mrs. Alison.
- July 4, 1857 314
- September 17, 1857 . . . 315
- March 10, 1866 366
- April 17, 1866 367

To R. Ball, Esq.
- May 24, 1834 40
- August 22, 1846 156
- November 13, 1851 . . . 232

To a Cousin.
- March 11, 1827 4
- December 1, 1834 44
- December 8, 1834 46
- March 11, 1835 51
- September 18, 1835 . . . 65
- December 14, 1835 . . . 68
- July 17, 1839 108
- March 14, 1840 111
- April 16, 1840 112
- July 5, 1840 121
- July 23, 1840 123
- July 26, 1840 126
- March 25, 1841 130
- September 11, 1841 . . . 135
- October 24, 1841 138
- April 17, 1842 140
- October 22, 1863 348

To Miss F——l.
- March 18, 1840 112
- December, 1843 144
- December, 1843 145
- February 18, 1844 146
- December 12, 1844 . . . 150
- September 6, 1854 . . . 275

PAGE

To J. Fennell, Esq.
- March, 1827 4
- May, July, 1829 . . . 9, 10
- September 12, 1829 . . . 12
- October to December, 1830 14-16
- January, 1831 . . . . 18, 19
- Sept., Oct., Dec., 1831 . 21-23
- September, 1832 . . . 26, 27
- October, 1832 . . . . 28, 29
- April 8, 1833 33
- October 27, 1833 36
- March 12, 1834 39
- December 23, 1834 . . 48
- July 9, 1835 51
- March, 1837 86
- December 14, 1843 . . . 145

To Dr. Fisher.
- September 21, 1835 . . . 64
- July 7, 1842 142
- May 14, 1866 369

To Miss F——r.
- November 11, 1834 . . . 42
- „ 1835 . . . 49

To Mrs. F——r.
- September 1, 1854 . . . 274
- October 20-22, 1854 . . . 276
- December 13, 1855 . . . 311
- March 31, 1859 325
- September 12-19, 1864 . . 354
- October 6, 1864 356
- March 24, 1865 360
- July 15, 1865 362
- August 16, 1865 364
- April 26, 1866 368

PAGE

To Dr. Asa Gray.
April 11, 1849 161
May 16, 1850 212
January 27, 1859 321
May 20, 1860 333
November 3, 1860 337
February 5, 1864 352

To Mrs. Gray.
December 8, 1850 222
January 11, 1851 225
May, 1851 231
January 28, 1852 233
March 18, 1852 234
April 6, 1852 235
May 12, 1852 236
June 2, 1852 237
July, 1852 239
October 21, 1852 240
June 30, 1853 242
January 3, 1859 321
February 9, 1859 324
September 2, 1863 348

To Mrs. A. Gatty.
August 16, 1850 218
September 9, 1850 219
November, December, 1859 . 329
January 10, 1860 331
May, 1860 334
July 18, 1860 335
September 8-15, 1860 . . 336
January, 1861 338
July 5, 1861 341
May 19, 1862 343
January 24, 1863 345
July, August, 1863 . . . 347
October, November, 1863 . 349
January 22, 1864 352
June 1, 1864 353

To Mr. J. Harvey.
April 7, 1827 6
July 26, 1827 7
Sept., Nov., 1829 . . 10, 11-13
December, 1830 17
February 10, 1835 50

To Mrs. Harvey.
September 17, 1849 . . . 179
October 17, 1849 182
June 21, 1850 212
June 27, 1850 213

PAGE

To Mrs. Harvey.
July 11, 1850 215
August 1, 1850 216
August 31, 1850 221
November, 1850 223
February 24, 1851 226
March 20, 1851 228
May 22, 1851 230
January 24, 1852 238
February 10, 1853 241
November 24, 1864 356

To Miss Harvey.
August 22, 1851 231
March 18, 1858 317
July 25, 1858 318
September 25, 1858 . . . 319
January 21, 1859 322
August, 1859 327
September 5, 1861 341
October 18, 1862 343
December 17, 1863 351
November 23, 1866 365

To Miss M. C. Harvey.
October 22, 1849 184

To Sir William Hooker.
July 13, 1831 20
September 10, 1832 . . . 27
October 1, 1832 31
August, 1833 34
September, 1833 35
November 12, 1834 . . . 42
November 25, 1834 . . . 44
December 12, 1834 . . . 47

To Mrs. Leadbeater.
December 25, 1835 . . . 72
August 20, 1836 79
July 2, 1838 105
September 23, 1838 . . . 105
October 3, 1841 138

To T. H. T., Esq.
March 16, 1865 359

To William Thompson, Esq.
September 19, 1844 . . . 149
January 19, 1847 158

To Mrs. T.
October 18, 1849 181
November 21, 1849 . . . 187
December 1, 1849 189

	Page
To Mrs. T.	
December 9, 1849	191
December 24, 1849	193
December 31, 1849	197
January 11, 1850	199
January 26, 1850	202
February 5, 1850	205
March 24, 1850	209
November 1, 1853	258
July 26, 1855	296
December 12, 1855	305
To N. B. Ward, Esq.	
January 29, 1835	49
December 20, 1836	82
March 9, 1837	84
August 14, 1837	93
October 15, 1837	98
December 11, 1837	101
February 8, 1838	101
March, 1838	102
March 18, 1838	103
April 20, 1838	104
October 23, 1839	109
December 20, 1839	110
To N. B. Ward, Esq.	
June 18, 1840	121
June 22, 1840	122
July 17, 1840	123
July 25, 1840	124
May 18, 1842	141
January 18, 1845	150
August 13, 23, 1845	152
June 3, 1846	153
June 6, 1846	154
June 18, 1846	155
August 6, 1846	155
January 15, 1848	159
March 29, 1848	160
June 30, 1849	163
July 29, 1855	300
To ——.	
March 11, 1836	75
To ——.	
April 7, 1859	326
To ——.	
February 21, 1860	332
To ——.	
March, 1860	332
To ——.	
August 29, 1860	335

CONTENTS.

CHAPTER I. 1811—1832.

BOYHOOD.

Birth, parentage, and home—Youghal—Ballitore—Schoolboy letters on Botany, Politics, &c.—Visit to London—First letter to Sir Wm. Hooker—Botanical letters to Mr. Fennell—Death of his mother—Visit to Scotland—Letter to Sir Wm. Hooker. . . . . Pages 1—30

CHAPTER II. 1832—1835.

CONTINUATION OF HOME LIFE.

Removal to Plassey—Botanical pursuits—Story of J. F.—Kilkee—Desire for foreign travel—Marriage of his sister—Death of his father—Unsettlement—Prospect of visiting Cape of Good Hope—London—R. Brown—N. B. Ward—Letter from Portsmouth. . . . . Pages 31—52

CHAPTER III. 1835—1836.

VOYAGE. SIX MONTHS AT CAPETOWN.

Porpoises—Swallows—Cowper—Anecdote of a passenger—Tropical rain—Shark—Reflections—Southern cross—Pigeon—Albatross—Off Table Bay—Landing—First picking of plants—Excursion to Devil's Mountain—Ludwigsburg—Caffre war—Illness of his brother—Change of prospects—Ferns, *Juncus*, &c.—Secretary bird—Reflections in letters to Mrs. L.—Structure of Algæ—*Hemitelia* fern—Letter to —— —Party embark for England. Pages 53—77

CHAPTER IV. 1836—1839.

SECOND RESIDENCE AT CAPETOWN.

Death of his brother—Return to Capetown—Captain L. of ship Wellington—Reflections on his African home—Loneliness—Amusements—Microscope—Tuberose—Dislike of flattery—Remarks on Cape produce, &c.—*Hesperanthæ*—Purchase of house—Accession of Queen Victoria—Begins "Genera of South African Plants"—Coleridge—Live stock—Botany—Mr. Griffith—"Genera"—Cultivation of *Disa Grandiflora*—Death of his nephew—Trip to the Paarl—Ostrich—His old home—Mr. Backhouse—Health fails—Leave of absence. . . . . Pages 78—107

CHAPTER V. 1839—1840.

LEAVE OF ABSENCE.

Return to England—Visit to Mrs. Griffiths—Beautiful seaweed—Letter from London—Continental tour—Rome, Colosseum, St. Peter's, Easter services, Arminian Church, Illuminations—Letters from Dublin—London—Mr. Menzies—Letters on shipboard—Sails for Capetown. . . . Pages 108—127

CHAPTER VI. 1840—1842.

THIRD RESIDENCE AT CAPETOWN.

Mr. Backhouse—Schoolmaster—Extract from "Wilberforce's Correspondence"—Church views—Thoughts on affliction—Letters on the church—Letter to Mrs. L. . . . . Pages 128—139

CHAPTER VII. 1842—1849.

COLLEGE APPOINTMENT.

Illness—Return home—Resignation of Cape appointment—Death of Mr. Menzies—Isle of Wight—Miltown—Wicklow—Return to Plassey—College appointment—College life—Leighton—Magee—Vacation — Kew — *Thuretia* — Mrs. Griffiths—*Fungi*—College work—Death of Mr. Griffith—*Woodsia tricomanes*—Trip in yacht—Death of Mrs. L.—"Phycologia Britannica"—Letters to Mr. Thompson—Obtains Professorship to Royal Dublin Society—Clapham Rise—Invited to lecture at Boston—Letter to Dr. Gray. . Pages 140—163

CHAPTER VIII. 1849.

TOUR IN THE UNITED STATES.

Sails for Halifax—Harbour—Walk to Point Pleasant—Plants—Second ramble—Pitcher plant—New York—Long Branch—Long Island—Croton Viaduct—Hyde Park—Flowers—Church Service—River Hudson—Troy—Trenton Falls—Buffalo—Impressions of Niagara. . . . . Pages 162—180

CHAPTER IX. 1849.

TOUR IN THE UNITED STATES.

Arrival at Boston—Cambridge—Dinner party—Conversazione—Sir J. Richardson—Agassiz—Mount Auburn—Evening party—Laura Bridgeman—Last lecture—Thanksgiving day—Prescott—Yale College—Prof. Silliman—Mr. Dana—Cooper—Dr. Wainwright—American City Parish—Philadelphia—Lucretia Mott—Museum—Dr. Leidy—Morton—Girard College—Penitentiary—Church—Christmas in New York—Dinner party. . . . Pages 181—199

CHAPTER X. 1850.

TOUR IN THE UNITED STATES.

Statues of Washington—Journey to Wilmington—*Dionæa*—Charleston—Dr. H.—Dr. G.—*Palmetto*—Dr. B.—Journey to Savannah — Town — Vegetation—Cotton — Rice mill—Quoit club—Arrival at Key West—First walk—Palm trees—Seaweeds—Washington—Lectures at Institute—Scientific Meeting at Charleston—Professor Agassiz. . . . . Pages 199—211

CHAPTER XI. 1850—1853.

HOME LIFE AND CORRESPONDENCE.

Arrival home—Remarks on America—English Church—National feelings—Visit from Dr. S. of Charleston—Reflections on Death of Sir R. Peel and Duke of Cambridge—Mrs. Griffiths—Plassey—Acquaintance with Mrs. A. Gatty—Causeway—American travellers—Co. Tipperary—Mrs. Bell Martin—Church matters — Hippopotamus—Lurgan—Belfast—Armagh—Rev. T. Moriarty—Papal aggression—London Exhibition, 1851—Letters to Mrs. Gray—Tour in Switzerland—Prospect of South Sea voyage. . . . Pages 212—243

CHAPTER XII. 1853.

VOYAGE TO THE SOUTHERN HEMISPHERE.

Gibraltar — Malta — Nile—The desert—Dying camel—Suez—Red Sea—Aden—Arrival at Point de Galle—First drive through tropical scenery—Trincomalee —Palanquin journey of six days—Peradenia—Visit to coffee plantation—Church at Colombo—Algologizing at Belligum Bay—Voyage to King George's Sound—New South Wales. . . . . Pages 244—262

CHAPTER XIII. 1854.

AUSTRALIA.

First impressions of New South Wales—Native convert—Seaweed picking—Cape Riche — Bush journey—Freemantle — Mr. Drummond—*Algæ*—Rottennest Island—Arrival at Melbourne—Letters on the death of a young relative. Pages 263—276

CHAPTER XIV. 1854—1855.

AUSTRALIA.

Port Faery—Phillip Island—Georgetown—Journey to Hobart-town — Visit to Port Arthur—Walk with Lieutenant G.—Dead Island Cemetery—Convict prison—Church sermon—W. S. O'Brien's cottage—Sydney Harbour scenery—Mr. Bennett—Luminous agaric—Newcastle—Hexham—Mr. Scott—Embarks in "John Wesley" for the Friendly Islands. . . . Pages 277—291

CHAPTER XV. 1855—1856.

NEW ZEALAND, FRIENDLY AND FIJI ISLANDS.

Voyage — Harbour of Auckland — Fern Valley—Arrival at Tonga—Village—Natives— Visit to a chief—Coral reefs—Letter to N. B. Ward—Cruise among the islands—Algologizing with Eliezar—Vavau—Native pic-nic—Voyage to Fiji—Archipelago—Loti—Lakemba—Arrival of King George—Bau—Return to Sydney—Letter to Mrs. F.—Voyage to Valparaiso—Illness.
Pages 292—311

CHAPTER XVI. 1857—1861.

HOME LIFE AND CORRESPONDENCE.

Return home—Professorship to T. C. D.—Death of his sister—Death of his niece—Vacation tour—Arundel Castle — Penzance — Scilly Islands — Holmes's "Autocrat of the Breakfast Table"—Stone at Barnsley—Seaweeds—Poerio—Letter—Ballybunion—Visit to Cambridge—*Protococcus*—African mission—Visit to Ecclesfield—Darwinism. . . . . Pages 312—338

CHAPTER XVII. 1861—1864.

HOME LIFE AND CORRESPONDENCE.

Marriage—Illness—Miltown—London Exhibition, 1862—Dr. Vaughan's sermons—Kingsley's "Water Babies"—Flora Capensis—Church sittings—Normandy—St. Servan—M. Lenormand. . . . . Pages 339—358

CHAPTER XVIII. 1864—1866.

CONCLUSION.

Increased illness — Arcachon — Death of Henry Christy—Biarritz—Cambo—St. Servan—Death of Sir Wm. Hooker—Dublin—Letter on the Greek Church—Torquay—Letters to Mrs. Alison—Farewell letter to Dr. Fisher—Death.
Pages 359—370

MEMOIR OF DR. HARVEY.

CHAPTER I.

BOYHOOD.

William Henry Harvey was descended from a Quaker family of Youghal. His father, Joseph Massey Harvey, was the eldest of five brothers, two of whom became merchants in Cork. Joseph settled in Limerick, where he married Rebecca, the eldest daughter of Thomas Mark of that city, and became one of its principal merchants. His residence was Summerville, a country-house prettily situated on the banks of the Shannon. There, in the February of 1811, William Henry was born; and, when indulging in visions of foreign travel, he used often playfully to allude to the great comet of this year, as the star of his destiny. He was by several years the youngest of eleven children, and thus naturally became a great pet. Yet, being the solitary baby of the household, his infancy and childhood were more lonely than is usual in so large a family. His only playmates were the son and daughter of Mrs. J. Fennell, his mother's widowed sister, who then resided in the city of Limerick, but who afterwards formed part of the family at Summerville.

His early love of botany he attributed to the companionship of an old gentlewoman, an intimate friend of his mother, whose delight was to carry him to the garden, and teach him the names of the beautiful flowers with which it abounded.

In few instances can it be more truly said that "the child is father to the man;" for the boyhood of few men presents a greater number of those traits which in riper years formed the charm of his character.

His earliest enjoyment of the seaside was at Youghal, and there were gathered his first shells, which in time extended to a considerable collection of both foreign and native. His taste for conchology, as well as other branches of science, was fostered by the intimacy then formed with Robert Ball, afterwards so well known as an eminent naturalist, with whose family he there became acquainted. In 1844 Mr. Ball was appointed director of the museum in Trinity College, Dublin, and by Dr. Harvey's election to the botanical chair in the same year, the friends were again brought into happy association until the lamented death of Dr. Ball in the spring of 1857.

The first boarding school to which William was sent was that of Newtown, near Waterford. There he soon outstripped his schoolfellows, and at the early age of thirteen was removed to Ballitore school, in the county of Kildare, then conducted by James White, who joined to extensive attainments in classical, scientific, and general literature, a knowledge of the various branches of natural science, which enabled him to appreciate, and induced him to foster the peculiar tastes of his pupil. At this school, where many of William's brothers and cousins had received their education, he found wider scope for his tastes, and more congenial society; not only as regarded his school companions, but among the families of the village, which at that time contained an uncommon proportion of persons of cultivated minds and literary acquirements. Here also the field of natural history opened more fully to the cravings of his youthful enthusiasm.

The French teacher in the school at this time, Theodore Eugène Suliot, was a young man of singular talent, who fully understood the mind of his gifted pupil, and a cordial intimacy quickly sprung up between them. Mr. Suliot thus writes (in forwarding to the editor what he calls "a few relics of that delightful friendship with the most engaging boy it was ever my fortune to know"):—

"Many notes passed between us during my intercourse with him in Ballitore, in the nondescript character of half-tutor, half-playfellow. I find no traces of these now. I had other letters from him, besides the few from which I selected the following extracts, between the time of his leaving school and his departure for the Cape, but they are lost, with many other

like memorials of bygone experience. After his return to Ireland we never met, save during those few golden hours I spent at Miltown Malbay, wandering with him on the seashore, picking shells, gathering seaweed, and basking in the sweet light of his childlike playfulness and innocence, seemingly unspoiled by years or contact with the world. After that time all intercourse ceased; not from any diminution of regard on either side, for he never forgot a friend, but our paths diverged. I continued plodding on in my obscurity, occupying till lately only a subordinate position in the profession of teaching. He was led, by the force of genius, to devote his thoughts and energies to the beautiful science he had loved from his boyhood, with a dim unconscious anticipation of the rich reward which she had in store for him. I hailed his growing fame from afar with delight and pride. At distant intervals I managed, through mutual friends in the old country, to send messages of sympathy in his labours and triumphs; and I heard with sorrow of his failing health and peaceful close.[1] Alluding to walks we had together when I was a teacher in Ballitore, and he my ideal of a charming, innocent, gifted boyhood, he writes:—

"'Miltown Malbay, 1826.

"'If I am strong enough I shall go to Kilkee for the *Helix caperata*, and bring to mind that day of joy we spent there. The Scotch rose, the Medea! I have made several additions to my collection of shells since I came here, having found several that Turton himself never saw. I have some idea of writing him a letter, enclosing some specimens, as they are small. How strange to write to a man I never saw; but I think such *impudence* is allowable when it is for his own benefit.'

"In another letter of 1826, received when I was a teacher at Darlington, he describes his private pursuits apart from his school-work. 'I am now during the winter months engaged in the useful occupation of making a new language. I shall have only one declination of nouns, one conjugation of verbs, one rule of syntax, and *no exceptions*. Could there be anything more perfect? I also intend to study my favourite and *useless* class,

[1] The editor would gladly insert the whole of the interesting matter furnished by Mr. Suliot; but due regard to brevity admits only of a few characteristic extracts.

Cryptogamia. I think I hear thee say, Tut-tut! But no matter. To be useless, various, and abstruse, is a sufficient recommendation of a science to make it pleasing to me. I don't know how I shall ever find out the different genera of mosses. Lichens I think will be easy, but fungi I shall not attempt; not at all from their *difficulty*, but only because they are not easily preserved. But do not say that the study of *Cryptogamia* is useless. Remember that it was from the genus Fucus that iodine was discovered.'

"In the prospect of soon going home for the holidays, he writes from school:—

"'I have thought of remaining here by myself during the vacation, that my collection of butterflies may be more perfect.'"

In a letter written from home Mr. Suliot is requested, when in London, to go to some bookseller's shop, and ask for Cuvier's "Animal Kingdom," and look whether the class Vermes has specific descriptions or only generic ones. He adds, "I want to know this particularly."

William delighted at this time in Moore's works, and was especially charmed with Lalla Rookh, on which he descants at considerable length in this letter.

Writing in 1829, he is surprised that his friend should be so blind as not to discover that he is "proud, ambitious, and selfish." "Selfishness," he says, "has not yet broken out in any very alarming degree, but the seeds are there. They have thrown up their élastic cotyledons and their now slender but voracious plumula."

As chemistry had some place in the general scientific interests of the young student, his parents entertained thoughts of placing him with an eminent chemist in London. A better idea of the mind of the schoolboy at this time cannot be given than that drawn by himself in the following letter to an intimate cousin.

Ballitore, March, 1827.

My days of happiness are over. I am to be a schoolboy but for a few weeks. In short, I am going to bury myself amidst the smoke of dingy London, there to drag on a tedious existence, perhaps never more to return to poor Ireland; but no matter, I cannot help it. As we seem fated not to meet for a

long time, it seems necessary that I should tell more of myself than I have done. In person I am tall, and in a good degree awkward. I am silent, and when I do speak say little, particularly to people of whom I am afraid, or with whom I am not intimate. I care not for city sports, or for the diversions of the country. I am equally unknown to any healthful amusement of boys. I cannot swim nor skate. I know nothing of the delight of these, and yet I can amuse myself and be quite happy, seemingly without any one to share my happiness. My botanical knowledge extends to about thirty of the commonest plants. I am very fond of botany, but I have not much opportunity of learning anything, because I have only to show the plant to James White, who tells me all about it, which I forget the next minute. My mineralogy embraces about twelve minerals, of which I know only the names. I am totally unacquainted with foreign shells, and know only about two hundred and fifty native ones. As to ornithology, I have stuffed about thirteen birds. In chemistry I read a few books, and tried some experiments. In lithography I broke a stone and a printing press. These are my pretensions to science. The *Donax Irus* is a most curious shell. At Youghal it is rather rare, and never found except buried deep in the hardest limestone. On the contrary, at Miltown it is found abundantly, and never in any stone. This leads me to think it may turn out a different species. I hate to see people showing a thing to strangers, and being able to tell no more than that it is a very pretty specimen. This is the principal reason why I have paid no attention whatever to foreign shells. I could not procure the books which treated of them, and people have blamed me for not collecting. At length I made a beginning, hoping at some time to get the desired information. Linnæus in his *Systema* disclaims all attention to animals, and minds only the form of the shell. This, however, has brought his system into disrepute, and it is tottering to its fall; for he most preposterously places land, sea, and fresh-water shells in the same genus, and makes a little snail about one-tenth of an inch long, which inhabits the mountains of England, to be of the same genus as one of the most splendid sea-genera, *viz.*, the genus *Buccinum*. A few days and I shall have changed my schoolboy life for the apron of an apprentice. However, I shall not be

desolate in London. I shall have T. Fisher and Theodore Suliot, with whom I shall be as happy as I could be at so great a distance from home.

I am quite deficient in having studied mosses so little, but I have a great desire to get acquainted with them. They are not at all so difficult as people imagine. Wert thou to examine a simple moss, thou wouldst be in raptures as I was with the exquisite beauty and regularity of the fringe which surrounds the mouth of the capsule. Most persons think *Cryptogamia* a difficult and useless study. This might be true in the time of Linnæus, who but planted the seed. Under Hedwig it sprung up and flourished, but it was reserved for our countryman Hooker to perfect the flower.

William's brother Jacob had emigrated to America, and settled as a merchant in New York. He was very much attached to his young brother, and frequently wrote to him whilst he was a schoolboy in Ballitore, where he himself had been educated. To these letters William frankly replied, revealing his ideas about his future with perhaps more freedom to this distant brother than to those at home. He tells him that "he is neither fit to be a doctor nor a lawyer, lacking courage for the one, and face for the other, and application for both." Also that the family must give up being distinguished through his "buying cheap and selling dear" (quoting his brother's words), for he feels he is not suited for trade. "All I have taste for is natural history, and that might possibly lead in days to come to a genus called *Harveya*, and the letters F.L.S. after my name, and with that I shall be content." We subjoin two extracts from his letters at this period.

To Mr. Jacob Harvey.

Summerville, 4/7, 1827.

The utmost extent of my ambition would be to get a professorship of natural history. Indeed, only I must do something, I would rather be a quiet naturalist, and not be paid for teaching that science into whose depths I do earnestly desire to be admitted. But I had better go to London, as there I should be sure of such society as I could not meet with elsewhere, and

though I should have but little time to myself, yet I should enjoy that little the more. Elizabeth Fry gave me a very kind invitation to her house when I go.

To the Same.

Limerick, July 26, 1827.

I am a very fickle animal, so much so indeed, that my nickname is Butterfly; yet in spite of this I have had a constant taste for natural history, so far as it is regulated by an acknowledged system. Since my attention was turned to chemistry, I have also been steady in liking it as a science, though not caring much to dive into theories which are so continually varying, that when I am grown-up, Davy, like his predecessors, may be out of fashion, and instead of being looked upon as a great experimental philosopher, may be branded with the epithet of a blindfolded theorist. His discoveries are by no means placed beyond doubt, for it is just as easy to understand his celebrated theory of chlorine in a totally different manner from that in which he explains it.

Ballitore is extremely rich in all the branches of animal and vegetable nature. I had just finished the conchology and begun the flora, when I was obliged to leave it. I do not care whether you have handsome shells at New York or not, but I should be delighted to get them, handsome or ugly, particularly the genus *Chiton* (which Dr. Michell can show thee), as foreign ones differ vastly from ours, and besides, as they are very ugly, they are seldom brought over, consequently are not often to be met with. Get me all your land and fresh-water shells, if possible. Some from the lakes will be highly prized. I should be delighted to get stuffed birds, snakes, or other reptiles; in fact, specimens of all kinds of natural history. Try and send some seeds, with the botanical names of their plants, if you can. Your mosses must be very different from ours, and it is no trouble at all to pack them, for no matter how withered they may be on the voyage, by steeping them in water they will revive, so please send some with the shells.

His future occupation in life was now a subject of much thought to his parents. His dislike to the prospect of residing

in London at length prevailed with them, and a place was assigned to him in the counting-house, where his time was chiefly occupied as a kind of factotum to his father, whose advancing life and constitutional delicacy rendered such attention necessary.

On his return from school the cousins before alluded to became his constant companions, and participated in all his pursuits, amongst which was the formation of a botanical garden; and "William cares for nothing but weeds," became a frequent remark. In 1829 they were separated, by his aunt's going to reside in Clonmel, and the correspondence which was then briskly kept up between them gives the best picture which can be presented of the progress of his scientific pursuits for several ensuing years. Other young naturalists may be encouraged as well as interested by learning from these pages the course of study which these young men marked out for themselves, pursuing it with an earnest zeal that rendered industry a pleasure, and which, overcoming the hindrances attendant on their business occupations, made them avail themselves of every leisure moment for scientific improvement.

Miltown Malbay, in the county of Clare, had become the seaside resort of the Summerville family; and there, on the shores of the Atlantic, rich fields of marine botany opened to William's researches. Spring tides were his high festivals. Late and early he was on the rocks, following the receding waves to grasp the seaweeds, or bending over the urchin-beds and the pools studded with sea-anemones.

In selecting from his juvenile correspondence with his cousin, many readers, and especially the unbotanical, may find that the editor has exceeded the bounds of interest; but casting aside the greater part of the letters, and all matters of private and family nature, which no doubt greatly enlivened them, she has carefully endeavoured that no extract should be given without its seemingly desirable object, either in the way of pointing to some interesting plant or new book of study, or as marking some further step in advance on that ladder of science which he was climbing with such eager and persevering industry.

To Mr. J. Fennell.

Summerville, May, 1829.

Miltown has furnished sundry novelties, which shall be sent thee in due time. Among them I beg to remark about twenty species of *Carex*,[1] five or six of *Rubus*,[2] and *Hookeria lucens*.[3] I have got "Smith's Comp. Flora Britannica." Some very handsome plants have appeared in thy garden. *Plantago coronopus*,[4] a fine healthy plant. I have got a new *Veronica*[5] (*officinalis*), much like the mountain one, but not so pretty. Water-lily in a bad way. *Parnassia* growing, but not likely to flower. *Anagallis tenella*[6] just in blow. The mosses for the most part look well. The ferns are brisk. This is all I can think of about the botanic garden.[7]

To the Same.

July, 1829.

I intend trying Quebec for shells, as I might probably get fresh-water ones from the Lakes. J. Humphreys tells me *Patellæ*[8] are there as large as my hand. I got little at Miltown this year. One *Cardium* (minute) was the best. I believe it is a new species, as I can find nothing like it in Turton. With my highest magnifier, I find it has chain ribs like the *Bulla catena*. I found *Veronica scutellata*, and have brought fine plants. The *Dipsacus sylvestris*[9] finer than ever, a glorious-looking plant. The "queer thing from Ennis" is *Verbena*[10] *officinalis*. "Smith's Com. Flo. Brit." is a delightful little book, and particularly useful in large genera, as by its conciseness you have all the species under your eye at once. I have opened my mouth for *Salix*,[11] and do not despair of being able to master them. *Carex* is nearly an exhausted subject. I have investigated *Equisetum*[12] and have sundry species to send thee.

[1] Sedge [2] Blackberry [3] A moss.
[4] Buck's-horn plantain. [5] Speedwell. [6] Bog pimpernel.
[7] In this early correspondence the English names of the plants, &c., have been added, as likely to render the letters more interesting to unbotanical readers.
[8] Limpet-shells. [9] Wild Teasel [10] Verrain
[11] Willow [12] Horse-tail

To the Same

September, 1829.

I have got "Loudon's Encyc. of Plants," but am not quite in love with it as a dictionary, for the specific characters are not the best. The genera are also much cut up and put in bad characters. *Convallaria*[1] is divided into two genera, and the chief difference (who would think it?) one has axillary flowers, the other spiked. Again, *Convolvulus* is split, and its genera characterised by *bracteas!* I am about getting "Hooker's Flora Scotica," principally for a more minute account of Lichens, Fungi, &c., than Loudon gives. A few days ago I fell in with a new botanical acquaintance, *the secretary to the Linnæan Society*, J. E. Bicheno. He met us at Miltown, and we had a walk to Pavingstone Bay, where I found for him *Pinguicula lusitanica*,[2] which he had never seen. O the delight! It is rare in England. He also told me that what we call *Fumaria*[3] *officinalis* is *Fum. capreolata*, and that we have none of the former in Ireland. I have attacked *Jungermannia* somewhat in earnest. I got few shells from Miltown, but have brought *sand* from Lahinch, which promises well. I have got shelves and drawers in the study, which are comfortable to my rapacity. No answer yet from Sowerby.

The young naturalist, however, was not so absorbed in his favourite pursuits as to be either inattentive or indifferent to the political changes which affected the welfare of his country, as well as to those still more important and stirring events on the continent of Europe which followed the downfall of Napoleon. The grasp which he took of these movements, and his ardour in the cause of national freedom, appear in letters addressed at the close of this year to his brother in New York.

To Mr. J. Harvey, New York.

Limerick, September 4, 1829.

It was not because I was hurt at my last letter not having been answered that made me not write for so long a time; but thou must know that a correspondence, whatever may be the wishes of the parties, cannot be kept up without both

[1] Lily of the valley, or Solomon's seal.

[2] Pale butterwort. [3] Fumitory.

sides being active. *Positive* and *negative* may do very well in electricity, but in the common concerns of life they are very unpleasant.

Thou wilt have heard of the wonderful change in the politics of Ireland. How Wellington and Peel have learned sense at last; how O'Connell can now sit in parliament; how the entire county of Clare was lit up with bonfires on the night that the news of the king's speech reached us; and how the conflagration spread from county to county, till nearly all Munster was lit into one great bonfire, far more brilliant than those got up by our worthy Captain *Rock*, proving to the people of England how grateful the people were for being enfranchised. Yet, this much-desired act of grace on the part of the Government has come clogged with fetters which, though in reality trifling, appear monstrous to our prejudices. It was most amusing to see the papers preceding and following the king's speech. The high church papers all of a sudden changed their tone, and went so far as to hint the necessity of declaring the throne vacant (how very loyal!), while the opposite party were for once in their lives seen supporting the Government. But an end to home affairs. We are likely to have a very brisk campaign in Turkey. Poor Greece seems as far as ever from freedom, though she is in a more comfortable state by having France for her master instead of his Sublimity. But why need she wish to be free? She has liberty enough for the present, and the mere name of an independent government is nothing when she has to fight for it with such a *mild* and *polite* neighbour as Turkey. By-the-by, I fancy that our birds called turkeys have their name from their red, *bloody* necks, and their strutting pomposity, so very like the boasted strength and omnipotence of the "Brother to the Sun and Moon." I have not exactly as yet settled down to anything, but am a kind of a nameless person in "H. Brothers'" office, putting my hand to everything, but having nothing exclusively to do.

To the same.

November, 1829.

Well, peace is at last concluded with Turkey, and, as yet, all looks quiet in Europe, but who knows how long it may continue so? A very extraordinary address to the French army

went the round of the papers lately, taken from the French journals, exhorting them to stand by their country and drive out the Bourbons! Would they did so! though after it were done, new tyrants would probably spring up. The tree of liberty is, I think, in a hundred cases to one, like those trees which they plant in heaps of stones by the wayside at elections, just intended to look green for a few days, to cast a splendour round the successful candidate, and then be cast out when it can be no longer of use. How you have managed to keep your freedom is wonderful. I cannot conceive why it is that you have no Bolivars nor Napoleons. Thou expects that Wellington will now be popular in Ireland. Such is not the case. The Roman Catholics do not thank him for what they have forced from him, and the Protestants look upon him as a traitor; but still he holds the helm, and does not tell even his colleagues how he will steer, but gives his orders and is obeyed. Nothing transpires till the proper moment. Thy description in some late letters of Dr. Hosack's country-seat up the Hudson[1] have made me long to luxuriate there among the mosses and lichens, if but for one week, so much so, that I should even dare to cross the Atlantic were I my own master, and I do not despair of one day paying thee a visit by way of example. Now thou art married, we have less chance of seeing thee, for 'tis no joke to move a nursery, whether vegetable or animal. Thou talks of *good old times* being gone for ever. I think with Byron, that "all times when old are good." Our fathers thought just as much of their fathers' times as we think of theirs, and yet the world has not grown so bad as not to be lived in.

To Mr. J. Fennell.

Limerick, September, 1829.

How did the news of my intended progression through foreign parts reach you? Be that as it may, I intend leaving in about a week, for Dublin, Liverpool, London, Edinburgh, and Glasgow. I go with Joseph, and hope for sundry pleasures. Perhaps I may see Hooker. Oh, the delight! My new acquaintance, Bicheno, is more of a theorist than a practical

[1] Hyde Park.

botanist. He cares nothing for mosses or for *Jungermannia*, but is anxious about elms, of which I, alas! could say but little. Why did we not follow up our investigations? The feathered elm, by-the-by, is *Ulmus glabra*. I have found in sand, a specimen of the bottle-shaped *Serpula* (see Turton). It is a pretty little wretch, but smaller than *Nautilus calcar!* I am thinking of planting sallows round *Cryptogamia*, and making a bower, and having the mosses arranged on a stand like plants in a blow-house. Then I defy the birds. There is a magazine about to be published monthly, called, I think, the "Edinburgh Journal of Natural and Geological Science." Natural History to be the principal thing. I intend getting it, and haply—yes, haply, writing for it. I am busy now in my leisure times, drawing plates for the "Testacea Hibernica." Will it ever be finished?

The anticipations alluded to in the foregoing letter were fully realised, and he makes the following *characteristic* mention of London in writing to his brother.

Liverpool, November, 1829.

I am not, after all I had heard, disappointed in London. The Regent's Park is certainly the most splendid thing I had any conception of in the way of town houses. Each row has the appearance of one entire palace, complete in its parts with pillars, statues, and all the panoply of luxury; but alas! alas! these are not stone, as they appear, but *Roman cement!* as we discovered by seeing some new ones where the brick was exposed. It is rather provoking to find out such things, as it greatly impairs our idea of the consequence of the inhabitants. I never was in such a place for spending time and money, and getting sore eyes. Parliament was not sitting, nor royalty in town, yet there was plenty to interest for three weeks at least. Well, what do I think of London? Why, that there must be a great many lamplighters. That is all that need be said, in my humble opinion, on such a comprehensive question, for surely thou would not wish me to go into details which might go on for pages and sheets ad infinitum.

To Mr. Fennell.

Limerick, December, 1829.

I send herewith a parcel from Sowerby. Some of the specimens are not good, but he had no better. Send me some of the *Acasta Montagui* when picked from the sponges. He is a pleasant man, but somewhat awkward in his manners, so there was a pair of us. I talked to him much *de genere Veneris*, and the muscular line, and he agreed with my genera—all *Bulla*. His last words were urging me to send him the papers for the Zoological Journal. I saw Bicheno, my botanical *chum*. He seemed glad to see me, and took me to a meeting of the Linnæan Society, at which, if not edified, I was amused. The president wore a three-cocked hat of ample dimensions, and sat in a crimson arm-chair in great state. I saw a number of new Fellows admitted. They were marched one by one to the president, who rose, and taking them by the hand, admitted them. The process costs 25*l*. Bicheno also gave me a handsome copy of Turner's "Muscologia Hibernica."

The plants in the hedges in England are very different from ours. The clematis and maple are as common as blackberries with us, and the *Solanum*[1] is also very frequent. *Lamium album*[2] is everywhere. I was at the Zoological Gardens, quite a paradise, bears and wolves, lions and tigers, and all sorts of venomous reptiles, enjoying themselves as much as they can do, with sunshine, flowers, and good substantial food. It would comfort one addicted to ennui to see the monkeys. Sowerby has sent thee the names of all thy shells. Those which retain the old names he left so intentionally.

To the Same.

Summerville, October, 1830.

. . . . Now to answer thy many questions and comment on thy observations.—Mason delivered the microscope. The *umbel* from Ballybrado I presume to be Wood Sanicle (*Sanicula*). There is but one species. The *Lychnis* is *L. dioica*.[3] Probably

[1] Nightshade. [2] White dead-nettle. [3] Catchfly.

Hooker's *Silene inflata* is still with you. It differs from *S. maritima*[1] in not having fleshy leaves, and some few other particulars. The specimen in thy Herbarium is surely *S. maritima*, gathered among the rocks at Miltown. "Petals crowned," evidently means with little teeth at the top of the claws where it joins the limb. They occur in many *Caryophylleæ*—also in the *Borragineæ*. Our common *Fumaria* is *Officinalis;* let it curl its stems as it pleases. Bicheno told me it was *Capreolata*, but afterwards said he was wrong. I have examined *Aspidium filix-fæmina*,[2] and find him right in referring it to *Asplenium;* but I cannot conceive how he makes out *Aspidium dilatatum* (a true *Aspidium*) a variety of it, unless his plant differs from ours. I mean to investigate it closely.

To the Same.

1830.

I was two weeks at Miltown, and occupied chiefly with investigating *Confervæ*, at which I have made some progress; and though not yet acquainted with a quarter of the species, yet, as a *subject*, I have brought them under control, and nothing but opportunity is wanting to master them. Would it were thus with lichens. They are still a *chaos*. At Miltown I only added two phænogamous[3] plants, *Scutellaria galericulata*,[4] and *Geranium*[5] *pusillum*. The latter is probably to be found with you. It is very like *Ger. molle*. The petals are less cloven, of a darker colour, and the fruit very hairy. I am glad of *Geranium minimum*. I hope thou art *sure* of it.

I rejoice at the revolution in France. Those Bourbons!—will they never get sense?

I have received from Dr. H—y *Veronica montana!*—the *true* plant—very different from our variety of *V. officinalis*. It might readily be mistaken for a variety of *V. chamædrys* by an unpractised eye. It is known by its large flattened fruit. I am convinced that *Veronicæ* are best distinguished by the shape of the capsules. Dr. H—y also sent me *Jasione montana*,[6] as a new species. I thought of *Sherardia arvensis*.[7]

[1] Sea Campion. [2] Lady-fern. [3] Flowering.
[4] Common Skull-cap. [5] Cranesbill. [6] Mountain Scabious.
[7] Little Field Madder.

The little plant here alluded to, when first gathered by the young collector, was believed by him to be a new species of *Galium*, or ladies' bedstraw, a genus which it closely resembles. He sent it as a discovery to Dr. Taylor, and this mistake probably assisted in forming the habit of accurate investigation for which he afterwards became so distinguished.

To the Same.

Miltown Malbay, Sept., 1830.

Yesterday I added to the list of Miltown shells the *Nautilus spirula* of Turton (*S. Australis*), a most interesting addition. It is the largest of our native *Nautili*, and has seldom been found on British shores, though common among West Indian shells. I have been busy with *Confervæ* during this visit, and have scarcely looked for shells or phænogamous plants. I have got a new book on animals, "Fleming's Brit. Animals," which contains beasts, birds, fishes, mollusca, radiata (*i. e.*, urchins, star-fish, &c.), and zoophytes. On the whole it seems a good, "*enlightened*" book, although it contains some blunders worthy of the darkest ages of natural history—more especially in *bivalve* shells.

To the Same.

Dec., 1830.

I have been to Cork, where I added *Geranium rotundifolium*—at least the seeds thereof. It is, *passim*, about Cork. I have received a letter from Bicheno, telling me, to my no small diversion, that a plant of *Veronica*, which I sent him to ascertain the species, afforded great puzzlement to the learned in London. None of them—no, not Robert Brown himself—had ever seen anything like it. I enclose a branch of it; the main plant I am sending to Bicheno. The indefatigable Don (as Smith calls him) fancied it might be a variety of *V. agrestis*, but such as had never before been seen.

1830 is the year for revolutions. Amongst others I have got a new cabinet, and have my herbarium bound in eight volumes (not yet from the bookbinder's). The plants will be arranged in natural orders, and I have a page for every plant in Hooker, and a few blank leaves at the end of each volume for appendix.

It will be a great luxury when the plants are all in. I got the cabinet chiefly for lichens, on which I am in daily expectation of receiving two works, the "Methodus," and the "Synopsis Lichenum" of the great Acharius. These I have ordered, to fill up the time till Hooker's second volume shall appear. In Cork I had sundry luxury looking over books known before only by hearsay.—Hooker's "Jungermannia" not among the least of the delights. Oh, for Greville's "Cryptogamic Flora!" Alas! the price is 18*l.* or so. I escaped by "hairbreadth" going to Killarney last month; but "brighter hours may come." How I should revel among the Kerry mountains!

The following extract may make our young naturalist appear as a somewhat fierce democrat and revolutionist, while in fact he was in disposition and temperament much more of the aristocrat and conservative. His sympathy in the cause of freedom, here so warmly expressed, may be looked upon merely as an outburst of youthful ardour, kindled by his hatred of tyranny, injustice, and wrong.

It may be said besides that Moore and Byron then influenced young poetic minds quite as strongly as Longfellow and Tennyson do in the present day; and "The Torch of Liberty," handed from nation to nation, as depicted in the so-named poem, could hardly be read by so enthusiastic an admirer of Moore's fascinating poetry without awakening an echo.

Mr. J. Harvey, New York.

December, 1830.

I was in great fear when the first news came from Paris, while the three days of July were progressing, that some conciliatory measures would have been adopted which would have spoiled all. But no. The Bourbons were never more delightfully blind. They galled to the uttermost, and then there was no retreating, and they have taken their farewell of France for ever. Charles is pleasantly settled at Holyrood House, where I believe they still make a show of royalty pretty similar to that kept up by the ex-Stuarts. His unfortunate ministers will probably forfeit their lives in a few days, if they have not done so already. This severity is, I think,

unnecessary. I should have preferred making them a present to you.

We have just had accounts of a successful rising in Poland, at which all honest hearts must rejoice. They will of course be successful, and not only will "Catherine's bloody debt" be repaid, but we shall quickly have a revolution in Germany, and possibly in Prussia, so that we shall have a grand barrier against all future attempts of the Northern Autocrat. If Austria stirs a finger or moves a man from Italy, there will be a new volcano there. I wonder at Spain's tardiness.

The great O' still busily at work at his attempt to drive the Bank of Ireland from College Green to the Pigeon House, or across the Channel, or heaven knows where. Petitions are flowing to him from all quarters, among which are those from the *chimney-sweepers* and *hand-chairmen*. He has not yet got many partisans among the aristocracy.

To Mr. J. Fennell.

Ballibrado, January, 1831.

I have been skinning and attempting to stuff a few birds, but have produced nothing decent save in one instance, viz., the creeper (*Certhia familiaris*, Linn.), which I flatter myself on. I am curious to know thy success in the water hen which J. F. tells me he sent thee, as I have completely failed, an issue that my vanity ascribes to the badness of the wire, which to be sure had its effect. Robert Ball has a method of cleansing the feathers of birds, which I give you as well as I can recollect it. Make up a thick paste of starch and cold water, and lay it on over the affected parts, and when dry the dirt will come off on the starch.

To the Same.

Summerville, January, 1831.

Fleming goes herewith, and an essay I wrote for Sowerby, but had not courage to send. It will show thee my ideas of arrangement in the *most perfect* state to which they have yet arrived. Send back both in a fortnight, opportunity or not, as I prefer paying carriage to not having Fleming forth-

coming when in a humour to use him. Should this time, however, be too short for thy satisfaction, tell me, and I shall "suppress my feelings." The reason I want him back is, that I amuse myself of an evening with writing my "Bivalvia Hibernica," being a description of our native shells. I have got as far as *Donax*, so am nearly half through.

To the Same.

January, 1831.

I have thy letter, with Fleming, and the lichen (*aquaticus*) which I hope to examine with the microscope to-morrow. I have little doubt but that it will prove to be *Riccia natans* (one of the *Hepaticæ*, and first cousin to *Jungermannia*), rather a rare plant, never before seen by me, and whose fruit has not yet been detected in these islands. I shall rejoice to receive more specimens, enclosed in a small phial of water. When sending the specimens, state the *exact habitat*, whether common, and other particulars. *R. natans* is described by Hooker and Taylor to possess long flat *laciniæ*, mostly purple at the margin and underneath. I find such on thy specimens, but they are *green*, not *purple*. Try if any purple can be found. If the plant be really *R. natans*, it may open a communication between us and Hooker. I mean to send the *Potamogeton oblongus*[1] to Bicheno, in the spring. I am pretty sure it is the *oblongus*, but nevertheless only a variety of *natans* occasioned by shallow water, which might render the leaves less coriaceous and more membranaceous.

I do not feel competent to speak on the genera or families of univalve shells, as I know so few of their animals; and from those I do know I am convinced that no system in accordance with nature can be established, where the *generic characters* are taken exclusively from the shells. In the case in question, viz., univalve shells, I call no genus natural except that in which the animals have the same external and internal characters. Wherefore I hold, by easy extension of this principle, that the most natural families will be founded on the animals. Cuvier classes the univalve mollusca by the difference in their breathing apparatus, to me, very properly. *Turbo elegantissimus* affords

[1] Pond weed.

an instance of the impossibility of confining generic characters to the shells, as its animal is unlike that of any other sea-shell I have so far examined, and yet it approaches in its external character more to a *Lymnea* than to anything else. However, there are differences abundantly sufficient to keep it distinct.

Jungermannia will every day be unfolding her fruit. When rambling, if thou meet with any such, I shall be glad of them.

Hitherto William had pursued his scientific researches with little assistance or encouragement, beyond what books and the sympathy of his cousin afforded. But now an intercourse was about to spring up which not only added largely to the happiness of his life, but strongly influenced his future career, and confirmed the choice of cryptogamic botany as his peculiar study.

In the summer of this year he and Mr. Fennell visited Killarney, and there found the *Hookeria læte-virens*, a small moss, heretofore unnoticed as an Irish plant. By means of this discovery he introduced himself to Sir William, then Dr. Hooker, Curator of the Botanic Gardens at Glasgow, and thus began an acquaintance which quickly ripened into a warm and lasting friendship. This distinguished man soon perceived the earnest zeal and carefully minute investigation of the young botanist. He generously afforded him every assistance and advantage possible for his advancement in the science, and thus won his ardent gratitude.

The specimens were forwarded to Glasgow with the following letter:—

To W. J. Hooker, LLD.

Respected Friend,

Having discovered two new habitats for the beautiful *Hookeria læte-virens*, which I am anxious to have inserted in the forthcoming volume of the "British Flora," I take the liberty of enclosing specimens, trusting to thy goodness to excuse the want of a personal introduction. As the plant occurs in plenty in one of the situations attached, I think it highly probable it may be found in many other places, and very extraordinary that it was overlooked by J. T. Mackay, as it is found within three or four yards of his habitat for the *Trichomanes*. I have had no opportunity of comparing Cork specimens, but my

plants do not appear of a deeper or brighter green than *H. lucens.* The fruit unfortunately was old, many of the capsules had fallen, and many of the opercula, but it appeared from the number of broken footstalks to have been in plenty. Should thou think this letter worth replying to, thou wilt address me as under, and permit me (again apologising for taking the freedom to address thee) to subscribe myself,

Very respectfully thine,
W. Henry Harvey.

Summerville, Limerick,
7mo. (July) 13, 1831.

The kindness of Dr. Hooker's reply induced William to despatch without delay a second letter, in which he says: "I am only a very young Cryptogamist, in fact, scarcely more than commencing the study. It is, however, very gratifying to have discovered anything worthy of thy notice, and in the hope that they will be acceptable, I enclose some plants, chiefly *Algæ*, which have either puzzled me, or which are marked rare in my books of reference. I cannot express my gratitude for thy kind offer of 'Scotch Cryp.' Nothing could be of more use to me in my studies."

This package contained *Riccia natans*, found by Mr. Fennell, and a puzzling *Sedum* from East Ferry, Queenstown, Cork.

To Mr. J. Fennell.

Miltown Malbay, September, 1831.

Send me a list of all the *Algæ* thou hast *named.* The inarticulate species found here up to the present time amount to seventy-four, a respectable number, considering that there are only 140 native species. The articulate (*Confervæ*) are seventy or eighty, perhaps more, but of several I do not know the names, as they are not described in "Dillwyn." I long for Hooker's second volume, but still more for his second letter—not yet arrived—nor have I got the promised plants, but I live in hope. He has too much on his hands to expect him to answer in haste so insignificant a correspondent as I am. I must rest satisfied with his pleasure. I am likely to have a new correspondent in a desirable quarter, viz., Belfast. Robert Patterson,

who brought me letters of introduction, but whom I missed seeing. He offers to exchange the curiosities of the north for the south. It is well to enlarge our borders when opportunity offers. My journal already contains figures and descriptions of 100 plants, many of them rare and curious, and some of them I flatter myself are new. Among these is the *Red Snow* of the Arctic navigators, the *Protococcus nivalis* of Agardh. It grows on a rock in Pavingstone Bay. I am beginning to get an *idea* of Fungi. But I have had three months' idleness this year, and *I have* a conscience, however small. Next season, I flatter myself—but we shall see.

The only phænogamic plant I shall have to send thee from this is the *Zostera marina*, a bad specimen. It grows under the sea opposite Quilty Stand in abundance. I have missed the *Sagittaria* by not being at home, but surely I have got the worth of it.

To the Same.

Summerville, Oct., 1831.

We got home from Miltown a few days ago, and I found a long letter from Hooker awaiting me.

He has sent me a parcel of mosses by steamer (not yet arrived), also a present of Agardh's "Systema Algarum," a scarce book, and one which will be of great use to me in determining species. He will be very glad of some *Riccia natans*, so try and get more, and send it alive, with a particular *habitat*, that I may certify it to him as found by *thee*. He has given me his address in London, that I may write to him while there; and invites me to Glasgow, saying I shall be most welcome to investigate his duplicates of every sort, and have the free use of his library. I cannot help thinking how fortunate it was that I got up so early that morning at Killarney, and found the branch of *Hookeria læte-virens*. All our success since may be traced to that. I intend soon to attack Greville with *Algæ*, through Hooker. I have found many things that *ought* to interest him.

I do not know when I shall find time to look over the Killarney mosses. Do gather odd-looking Hypnums, and send them to me for the names, if at a loss.

It is full time for thee to get a microscope. To possess dry specimens (of mosses especially) without microscopic examination, is not to have any knowledge of them at all.

Turton has just published a "Manual of British Land and Fresh-water Shells. 150 *coloured figures.*" I intend to get it.

* * * * * * *

I agree as to the nonsense of sending my love in letters. The ethereal substance doth not consort with pen and ink.

To the Same.

Summerville, Dec. 12, 1831.

In my last letter to Hooker, I, casually as it were, mentioned that I had some thoughts of beginning a little work to contain figures and descriptions of new cryptogamic plants, and by return of post I had a reply thanking me for my "excellent parcel and welcome letter;" furthermore saying he rejoiced at my prospect, and with sundry flattering words as to my competency for the same, and adding that I should soon be "at the top of algologists!" The steps must be few indeed, if it is so easy to mount to the top. His letter is more like that of an old friend than a person whose features are unknown to me; for which of course I am very much obliged, but cannot help wondering at the humility of a man such as he is, in condescending to bestow so much time and trouble on a scribbler like me. He also offers to lend me some valuable illustrated works from his library, which he would venture to send to me here! This is a rare instance of faith in a person never seen or heard of, further than from himself. O, thrice happy trip to Killarney!

I have made out a list of the phænogamous plants known by us; viz., in the Herbarium, 372; known, but unpressed, 143. This not including *Rumex, Rubus, Salix,* and of course omitting ferns.

A heavy sorrow was now about to cast its shadow over William's sensitive mind, for which he was unprepared when the preceding letter was written, namely, the death of his mother, which took place on the Christmas Day following. Mrs. Harvey was held in esteem and reverence by all who were acquainted with her. Her character exhibited in no ordinary degree the fruits of true religion. She was humble, charitable, and benevolent. She had great strength of mind, yet she was timid and yielding, and was gifted with a vigorous understand-

ing and sound judgment, united to a most winning simplicity and naïveté. Beloved and honoured by her friends, it was natural that she should possess the warm affections of her children, and William especially was devotedly attached to her. His grief for her loss was excessive, and even when time had placed this bitter affliction in the softened distance, he could not allude to his mother without emotion. Though highly valuing sympathy, his deepest feelings were at all times hidden under silence and reserve. He shrank from displaying them even when with his most intimate friends, and generally had recourse to his pen for the relief of expressing them. His correspondents often in this respect enjoyed an advantage over those with whom he had personal intercourse. Writing to Mr. Suliot in 1826, he says, "When I was enjoying thy company in Ballitore, I used to doubt which would be the happier time, when I was with thee, or when I should be writing to thee from London; for I thought I could then say things which I had never before *dared* to do of what I was before I knew thee, and of the enjoyments of home, &c."

While under the above-mentioned sorrow, he turned for solace to his favourite science, which then, and afterwards in many gloomy days, shed over him a cheering and reviving influence. In March, 1832, he writes to Mr. Fennell:—"It is so long since we communed on paper that I seem to have nothing to say. Strange as it may appear, a long silence often diminishes matter to be communicated. This is the dead season for us botanists, yet I have more to do in that way than I can find time for, in investigating an enormous parcel of *Algæ* from Dr. Hooker, viz., all Carmichael's specimens, and also sundry parcels from Mrs. Griffiths, of Torquay."

His leisure hours were now devoted chiefly to the cryptogamic branches of his favourite science, and he was so fortunate as to be kept constantly supplied by Dr. Hooker with packages of plants from various quarters of the globe for his investigation. This pleasing employment led to an acquaintance with the labours of the greater part of those celebrated botanists whose researches had been similarly directed. In many instances a correspondence resulted, and their collections were sent for his inspection, which enabled him to add rapidly to his store of knowledge. Thus he became placed in that position of intercourse with those eminent men which had been

the object of his highest ambition; and his letters contain many grateful acknowledgments of the advantages thus acquired, through the appreciation and introduction of his kind and honoured friend.

Among the correspondence which at this time sprung up, was that with Mrs. Griffiths of Torquay, so frequently mentioned in his future letters, and with whom he formed a lasting and intimate friendship.

In the April of this year he went to Killarney, and on his return he writes to Mr. Fennell:—"Our *Viola lutea* is *curtisii*. I have no patience with such pseudo species. I have undertaken to describe the *Confervæ* for Dr. Hooker's "British Flora," which he accepts with 'thankfulness!' Very funny! but I have not deceived him. I have told him that I never gathered an alga till 1830, and have spoken of youth, inexperience, etc. But I have got tired of these and such-like confessions, and must submit to be an 'esteemed correspondent.' I send a specimen of *Turbo politus* from Bantry, and also a new species of *Lymnæa (involuta)*, very distinct from any other, most like *L. glutinosa*, but differing abundantly. I found a few of them in a small lake near Cromaglaun Mountain, Killarney. I thought I was gathering *L. glutinosa*, or probably should have searched with more vigour. 'Tis a lovely little shell."

Soon after he had returned from this solitary visit to Killarney, his father was attacked with hemorrhage from the lungs, and for some time required his close attention. He was consequently obliged to relinquish a trip to which he had eagerly been looking forward—"The delightful pleasure," he says in a letter, "of exploring the Scotch mountains in company with Dr. Hooker," by whom he had been invited to join the party.

He however managed to work with his accustomed industry at his new task. In May he writes to Mr. Fennell:—"I have had a packet from Dr. Greville. All *Algæ*, many rare. I rise every morning at five, and work till breakfast, examining or describing the Algæ for the "British Flora." If I do five species a day I think it good work. This may seem slow, but there is much to be compared and *corrected!* for I differ from Dr. Hooker on many species. Oh, impudence! oh, presumption! I send two specimens of *Iridæa reniformis*, a rare plant, now found for the first time in Ireland."

Change of air being recommended for the restoration of his father's health, William accompanied him to Kingstown, which was chosen as a seaside residence for some months. "Dublin Bay," he writes, on this occasion "is not the best place for *Algæ*. It is impossible, however, unless you go with your eyes shut, to visit any of our coasts without finding something new." That this, in his case, was verified, appears in the following letter, which also discloses his prospect of the long wished-for visit to Glasgow.

To Mr. J. Fennell.

Kingstown, Dublin, September, 1832.

I went to Portmarnock a few days ago, with J. T. Mackay and sundry others, and, being in such good company, found lots of plants. Mackay proposes other excursions north and south, in which I hope to add respectably to our Herbarium. This is a vile place for *Algæ*, and yet I have already found two new species of *Callithamnium*. I intend starting at last for Glasgow next week. W. P. and I propose to ourselves a walking excursion through the Highlands, to return by the Giant's Causeway. This trip will, I hope, be productive of many plants. Dr. Greville promises me many varieties from a late trip in the north of Scotland, in which his party had to put up with the most praiseworthy hardships, such as sleeping in the heather, and boiling their tea in an eight gallon iron pot, supping it with ladles, no doubt.

I have lately got a most pleasant correspondent in Mrs. Griffiths, a Devonshire lady, knowing *Algæ*; and I can afford thee some good pickings from her beautiful parcel. She writes me there is another on the way. She is a peculiarly agreeable person to me, in having the happiest knack of finding the rarest and most beautiful plants in the most perfect state; and from her isolated situation and the fewness of her references, she is glad to get in return for specimens my "valuable remarks!" an easy method of purchase. She is the "Patron Saint" of the genus *Griffithsia*. I am preparing drawings of seaweeds for "English Botany Supplement," which is the way, after all, in which my "new book" will appear. The drawings and descriptions will be partly by the Rev. M. J. Berkeley and partly by your humble servant.

To the Same.

Edinburgh, Sept. 11, 1832.

Here I am alone. W. P. not yet arrived, and I am dwelling among strangers.

How I shall get through to-morrow I know not, as I am going (by Dr. Hooker's desire) to visit G. W. Arnott, whom I do not know even as a correspondent. I leave this in the morning for his country-seat, some twenty-five miles off. Woe is me! I am in a "quandary." Well may I sympathize with Betty Foy!

I like Dr. Greville much. He has given me many things, chiefly Alpine plants—some extremely rare. I found Dr. Hooker at the seaside, away from books and plants, &c. I spent two days with him agreeably, and hope I shall not be the worse of this personal interview. He is just beginning to print his "Algæ." I like his family much. His youngest son is a botanist and entomologist, his elder an ornithologist. My sympathies of course lie with the younger. Dr. H.'s father is a delightful old man.

I have as yet seen little of the country. This city is certainly magnificent and wonderful, in every sense of said words. The people not unlike the Irish—plenty of them gaping in the streets, and children playing. I return to Glasgow the day after to-morrow, where I hope to meet W. P.

A part of a letter, written to Dr. Hooker immediately on reaching Edinburgh, is too characteristic to be omitted.

Edinburgh, Sept. 10, 1832.

My dear Friend.

Thou may well be surprised to receive a letter from me so shortly after parting, and in expectation of so soon seeing thee again, but I am anxious to express my sense of thy kind attentions during my stay with thee; and I know from experience that I should find it impossible to do so "vivâ voce." Thou must have remarked my extreme and even childish *mauvaise honte*, which is one of the most prominent features of my character. It is excessively painful to myself, and must appear contemptible to others. With Cowper, I can often say, that "the dread of being silent keeps me mute;" and even when I do get *fairly launched*, my voice often grows provokingly *thick*

or faltering, and I am forced to hurry to a full stop. You must have noticed how near to choking I was when speaking of the poor family who, during a famine, sent for the priest to prepare them for death. It was not because of the pitiful story, but simply from observing that you were all listening. It is a sad loss to our Society of Friends to mix so little with people of other denominations. To me it is peculiarly unfortunate, for being naturally of a *lazy* and silent disposition, I want to be roused and to be forced to take part in conversation. I hope it is not too late to improve, and that during this trip to Edinburgh, from being left to my own resources, without any one to throw the onus upon, I may get a little over my awkwardness. Forgive all this. I have been thus frank because I regard thee not only as my great botanical mentor, but also as a friend to whom from thy many kindnesses I am strongly bound in affectionate gratitude.

To Mr. J. Fennell.

Limerick, October, 1832.

If I remember right, I wrote to thee from Edinburgh a few weeks ago. Since then I have seen much of the world, and I hope I have picked up a few ideas as well as plants. There is an amazing difference between the vegetation of the Highlands and our own; and if I had had time, or means of conveying plants, I should have reaped a rich harvest. In ferns they are peculiarly rich. Only think of *Polypodium dryopteris*[1] and *Phegopteris*,[2] *Aspidium lonchitis*,[3] *Asp. viride*,[4] &c., being among the common ornaments of the mountains, besides sundry *Lycopodia*. I gathered few mosses and scarcely any phænogamics. I like Dr. Hooker more than ever since knowing him personally. I have undertaken to describe a large packet of Mauritius Algæ for publication in the "Botanical Miscellany." The extent to which I mean to go in botany is, to know British plants of all kinds as well as possible; to know Algæ of all countries *specially* well; to collect all foreign Cryptogamia that may fall in my way, and to know them *moderately* well. This is quite enough for my leisure. To be a general botanist

[1] Oak fern. [2] Beech fern, or mountain polopody. [3] Holly fern.
[4] Green spleenwort.

requires an income of at least 800*l.* per annum, and to devote all one's time to the subject. This would be to make a toil of a pleasure; and yet I almost think that were I an independent gentleman, I should enjoy a life so spent passing well, nor deem that I was uselessly frittering away my time. My reason for choosing the *Algæ* is pure compassion; they being sadly neglected by the present generation, though at a former time they were in high favour. I only came home last night, and have unpacked nothing yet. I have made about half a dozen new correspondents.

To Mr. F. he writes again in the same month as follows:—

Perhaps it is as well not to send me anything at present; for, sooth to say, I shall not have time to settle my Herbarium for months to come, and then—then I am going to begin on a *new* plan, and shall be glad of any common thing, such as *Bellis perennis*,[1] *Leontodon*,[2] &c. I am fairly sick of the "bound up" system. I gathered plenty of *A. lonchitis*[3] on Ben Lawers. Poor A. T.! have patience with her and respect her varieties. For my part I should have been glad to get *Sagina procumbens*[4] "flore pleno." I doubt not Hooker would like it also, and Brown, "the greatest botanist in this or any other age," would *I am sure* like to see it, as he is particularly interested at present about monstrosities.

When I talked of pursuing botany as the *business* of life, I did not picture to myself such botanists as *we* have hitherto been. My idea lit on such names as Robert Brown, Sir J. E. Smith, and Dr. Hooker. Surely the labours of such men as these are not useless, nor should they be charged with spending all their life

> In dropping buckets into empty wells,
> And growing old in drawing nothing up.

I fully agree that to spend all one's life in picking seaweeds and laying them in store would be a waste of time; but one cannot reach the top of the ladder at one stride, and must begin somewhere. *We* have not been enough of physiological botanists, and it is full time for us to begin. I would recommend a closer

[1] Common daisy. [2] Dandelion. [3] Holly fern. [4] Pearlwort.

study of the natural orders. It is an excellent opening to the root of the subject.

As to my tour—this is likely to be the most stupid part of my letter, for I hate journals unless they be written in piquant style, to which I have no pretensions. R. D. W. is the best journalizer I wot of. I wrote from Edina of my visits to Hooker and Greville, and that I was to start by Kinross for Arlary, the seat or farm of my excellent friend Arnott, known before only by fame—not even as a correspondent. I found him very pleasant, and most generous of his specimens, and I liked him much. The road to Kinross bleak and dreary—a heavy Scotch rain right in our teeth, which obscured Loch Leven; but next morning being clear, we saw the castle pretty well—interesting rather from the fate of poor Queen Mary and Scott's "Abbot" than from natural beauty. From Kinross to Glasgow in company with Dr. Wight, an East Indian botanist, who is about to publish on East Indian plants. At Glasgow mounted the coach for Stirling. Arrived at dark, wrote letters till tired, and snored till six in the morning. Climbed the famous Castle Hill, from which we had an extensive and magnificent view. Imagine a vast valley stretching from Stirling to Edinburgh (whose castle is seen on the horizon) bounded by cultivated and planted hills, those in the foreground bold and rocky, with the Forth visible throughout its whole course, forming the most beautiful curves and glittering in the morning sun. I never saw a more exquisitely serpentine river—one so beautifully *independent* of its banks. Verily I could say with the worthy "Bailie," "*That is the Forth.*" But this was not all. In the other direction we had the Highland mountains, Ben Lomond, Ben Ledi, Ben Voirlich, Ben Venu, and many other *Bens* stretching across half the horizon, thrown out by a foreground of a very quiet and placid character, through which also the Forth could be traced, properly relieved by woods and hills. Shall I go on after leaving Stirling's "tower and town," and entering the Lady of the Lake's country? Of course it is expected I should write the remainder in verse. Very well.

Here followed doggerel rhyme.

To Dr. Hooker.

Limerick, 29th October, 1832.

My dear Friend,

There is an auction of books going on in Dublin, the catalogue of which contains many curious old botanical works. It is too late to send thee one, but by writing at once to Mackay, he might pick up something of value for thee. They are part of the private collection of a *daft* Irish gentleman, whose passion it was, till he ruined his fortune, to attend all the principal auctions in Great Britain and Ireland, and to fill his house, stables, barns, and even his coach-yard, with all manner of curiosities. He was so fond of pictures that they were ranged *six deep* (one over the other) on the walls of every room in his house, besides having a large picture gallery. His *mahogany tables* were numberless, and his china services without end. Many cartloads of minerals, shells, fossils and insects were lying for years unpacked in his out-offices, where I have seen them, and the creditors found in a lumber-room some hundreds of Chinese gods huddled together, not to speak of the stuffed beasts, birds, and fishes. He collected books with the same reckless avidity, but once they were bought and sent home, the matter ended—he never looked at one of them again. The greater part he *could* not read if he *would*.

Poor Mrs. Telfair! I was about to call a pretty *Thamnophora*, which I find among her plants, by her name. I may do so still, though, in my own case, I should be perfectly indifferent to posthumous fame. It will, however, afford thee an opportunity to give a note on the service she rendered to botany. It is very true we must serve an apprenticeship to botany; and I am ready to acknowledge that thou hast some loss in employing my "prentice han'" in thy "Flora." Were it to do again. . . . . I . . . . but it is not.

CHAPTER II.

CONTINUATION OF HOME LIFE.

Mr. J. M. Harvey found the occupation of so large a house as Summerville too great a charge for his declining years and failing health, and too lonely when his family became so diminished. He therefore let it, after a residence of more than forty years, and removed to join for a short time the establishment of his eldest son, who lived at Plassey, in the beautiful neighbourhood of Castleconnel, which proved a congenial home to the devoted young botanist.

The banks of the Shannon presented a richly luxuriant and diversified vegetation. In one direction lay a broad tract of peat bog, where many rare plants were mingled with the heath and other common clothing of its moist surface. The *Drosera* or sundew glistened among tufts of white moss and reindeer lichen, and the delicate pink *Andromeda* recalled to fancy the story of its fabled name, while the spiked flowers of *Utricularia* adorned the pools. At some distance on the opposite side of the river a ruin crowned a hill, which bore the name of New Castle, by a not uncommon reversion. Here were rocky hillocks bright with stonecrop and rock-pansy, while below these a marshy district afforded most of the common sedges, besides the graceful *Carex pseudo-cyperus.*

After the office duties of the day were over, it was a delightful refreshment to William to visit these habitats, even without the attractive hope of making new discoveries. His walk from town lay by the river side; and he seldom or never trod the way without gathering some flower for examination with his pocket

magnifying glass, or poking in the streams at either side for minute plants.

According to his usual habit, he rose early, and occupied the time till breakfast in examining his own plants, and making drawings of them, if not engaged with the collections sent him by his botanical friends. His evening walks amid the beautiful scenery encouraged his dreamy fancies, and the poetic vein frequently broke forth in sportive rhymes, as well as in verses of higher merit. A letter to Dr. Hooker confesses a state of partial idleness. "Mrs. Telfair's *algæ* are finished at last. I must appear sadly idle by having consumed so much time in so trifling a matter. I certainly might have forwarded them some months since, had I thought thou wert anxious for an early publication, but I was a good deal occupied with other matters, botanical and *anti*-botanical. I do confess, however, that I really have idled. While I write the rooks are cawing, and the old elms standing out against the sky in the quiet evening are quite poetical."

To Mr. J. Fennell.

April 8th.

"Tempus per forelockum" is an excellent saying. I have made up a parcel of algæ (pronounced by the learned *aljee*) for Miss T. and thyself, which I hope will prove acceptable. I have lately discovered a most curious new genus of fresh-water algæ, order *Diatomaceæ* (a precious set). I call it *Chloroglossum* (green tongue) *Berkeleyanum*. It is allied to *Cymbella* and *Berkeleya*, and provokingly to *Oscillatoria*. Well, Connemara in May—is that the go? The people at Kilkee are arranging for a future residence. A pleasant place to pay them a visit. Ought to be good algæ there.

June 23rd. I fear I shall not go anywhere this year. By special favour I may get a week at Kilkee. This is all I hope for. Tempora mutantur; and it is really time I should give up my life of pleasure. I am doing but little in botany. *Andromeda polifolia* is common in a bog opposite Plassey. Are not Mrs. Griffiths' plants beautiful? She is about publishing dried specimens of Devon algæ, with names, &c. This is the easiest way of getting to be master of them. Each fasciculus contains

fifty species. I have written a power of verses, and consequently of nonsense, which, when you come, you may laugh at.

"The power of verses" to which he alludes he looked upon in after years as a mass of juvenile folly; nevertheless they contain many striking similes and gems of thought, and have been fondly preserved by the remnant of the domestic circle for whom they were written. No better picture of his favourite Miltown Malbay is to be found than that drawn in a poem which six years afterwards he severely condemned in a letter to the cousin to whom he had dedicated it. "I have," he says, "lately read 'Miltown,' and verily I know not how you tolerated such trash. I should like to destroy every copy of it in existence. It makes me groan. Behold how we change from year to year! Ten years hence let us see!"

In August he writes to Dr. Hooker as follows:—

"I have just returned from a short visit to the Western Sea, in which I have had a very fair success. I intend forwarding to thee a parcel from its proceeds, with whatever else I may find in the interim. My visit was to Kilkee, a bathing shore, fourteen miles from Miltown, where I had never previously had an opportunity of botanizing. It appears to be rich in interesting plants. I was prevented going to Connemara, so the *Erica* may remain another season ungathered.

"I have lately been dissecting our common *Hyperica* (St. John's wort); and it is really curious that such gross errors should have crept into the description of one of our most common and well-known plants, and that botanists should have gone on copying from one another without using their own eyes. If ever I write the "Flora Hibernica" I am determined to dissect everything. Apropos of dissection, I am a miserable manipulator, and should be very grateful for a few lessons. I am much puzzled as to how you dissect minute seeds. I find them very difficult to cut on the table of the microscope.

"I have had a very kind letter from Agardh. He requests to open a correspondence with me, to which, of course, I have gladly acceded.

"I have lately sent out to Ceylon a store of paper bags to be filled with algæ, by a young surgeon, sailing to that island from Cork. He is a Mr. Cavet, and something of a botanist,

who considers it not only a *pleasure,* but a *duty* to do all he can for science. I mentioned to him thy *Filices Asiaticæ,* and have begged of him to attack the mountains. As I do not know him personally, the matter was conducted by one of my cousins in Cork, who holds out hope of his being useful to us. I have always good hope when *pleasure* and *duty* pull together. The work is then pretty sure of being well done. We have very warm weather; and while I write I am much annoyed by swarms of small moths (I know not what species), which are flying over my paper and round the candle. Such weather awakens my longing for Peru or Chili, which, although the prospect be distant, I am not without hope of one day seeing."

To the Same.

Elmfield, County Down, September 9th.

I have been travelling and paying a visit to some relatives, in company with my father and sister. To-morrow I go to Briansford (the fine domain of Lord Roden), situated among the Mourne Mountains, and near the coast. From thence to Belfast, where I join W. H. P. in a tour to the Causeway. We then mean to cross to Glasgow, and take a sail up Loch Lomond, which we missed on our last tour. I hope to cross to Helensburg on our way up the Clyde, and that Mrs. Hooker may find me a little improved in loquacity, though I fear I have yet much to learn in this, as in other sciences. She will perhaps remember having given me a lecture on the subject, which I assure her has been often thought of when I found myself falling into silence and absence in company, and I have endeavoured with some success to rally. It is very sad, but I fear I shall always be more or less foolish in this matter.

29th September he writes—"It is now, I think, pretty evident to my brothers that I shall never make a merchant. I have been five years in the office, and yet, in very simple matters, I am almost as ignorant as when I entered it. To be sure, I have not been kept very closely at work, having generally had a few months of recreation in the summer; nevertheless, I have had ample time to acquire a knowledge of business. But somehow, from a distaste to intercourse with the 'vulgus'—in the way of buying and selling—I am sadly deficient in mercantile tact."

October 11th.

I saw Mackay in Dublin, and have arranged with him to write the algæ for his "Irish Flora." He takes the mosses himself. I have not yet regularly set to work, but hope to do so in a few weeks. Meantime, I shall have full occupation for my leisure hours in my own herbarium.

I have got from my friend Robert Ball in Dublin, who is an ornithologist and general naturalist, one or two butterflies for Joseph, which I believe are uncommon, at least in this country. I hope to get a few more from his sister, who lives in Youghal, and who has lately become an ardent papiliologist. W. may like to correspond with him about birds, and Ball would, I think, be glad to exchange specimens with him. I never met a more generous fellow in the way of duplicates. He would rob himself to give to me if I would allow him.

To J. Fennell, Esq.

Plassey, October 27th, 1833.

I am about taking a dip into a *sea* where I cannot *see* my depth. I do not allude to describing the algæ for the "Flora Hibernica." That is a small matter, but to taking a plunge into exotic or general botany—a gulf from which I never hope to be extricated. Yet my time is likely to be more limited than ever, as J. G.[1] is leaving the office, and I am to step into his shoes. These said shoes will, I fear, pinch my botanical corns; but we cannot have everything as we wish. I have only discovered about half-a-dozen new plants this year, which is bad.

Thou asks if I am remunerated for my work. I answer yea, if much amusement and pleasure be remuneration. Dost recollect the story of J. F. (the old man) and his gardener? If not, here it goes.

The *wise man* went into his garden and called his gardener. They walked on together, and, coming to a bed of tulips, says Jemmy—"What are these?" "Tulips, sir." "Will they boil?" "No, sir" "Throw them out;" and so of other plants. They came anon to a *holly-bush*, which was condemned in like manner, till the gardener pointed out a robin singing on the highest

[1] J. G. was book-keeper in Harvey Brothers' office.

bough, and argued that, for the sake of the robin, the tree should be spared. The idea took, and the tree was let to stand for as long a time as the robin should frequent it; and so it remains standing unto this day. Now read my moral. The trade of botany may be but a holly-bush, yet so long as my robin sings merrily on its green boughs I shall not throw it out. Am I not very poetical? Nor am I homeless. "My mind to me a kingdom is," at least so far as my plants are concerned. I have got the little room over the porch for my sanctum, and there shall be snugger than ever I was, and may leave my things in any sort of litter without finding that they have been meddled with. Thou art right about New Zealand. I never thought seriously of it further than that I have looked forward to taking a foreign voyage before I finally *fix* myself for life.

I spent a week at Wicklow; and during that short time I added several plants to the Irish flora and a charming one to the British. Dr. Hooker gave me a huge bundle of exotic ferns, some of them the loveliest *vegetables* I ever saw. I also slipped over to Edinburgh, where I talked anti-slavery and temperance with S. and with Dr. Greville.

After the death of Mrs. Harvey, the family no longer visited Miltown Malbay; instead of which, however, William was accustomed occasionally to pass a few weeks with some relatives who had a house at Kilkee, a watering-place on the same coast, equally remarkable for its magnificent scenery, and offering similar advantages to the lovers of algæ. Nor were its cliffs less rich in plants of interest, the banks of the path leading to which were tufted with the lovely little bog pimpernel, perhaps nowhere to be seen in greater beauty.

His luggage on these occasions often excited the merriment of his friends, the greater part being a formidable array of the requisites for drying seaweeds, consisting of a quantity of coarse towels and blotting-paper, together with boards for pressing, which were furnished with leather straps and buckles. It was amusing to follow him to the shore, see his coat thrown off, his shirt-sleeve tucked up, and his bare arm plunged into the crevice pools between the rocks, from whence he drew forth the rare and delicate weeds so concealed under the green waving Ulvæ

and common mingled floating mass as to escape the notice of an ordinary collector.

Though apparently so contented with his home, the desire of seeing the vegetation of foreign countries in its living beauty was still strong within him, and an opportunity seemed at this time afforded of realizing the cherished day-dream. Mr. Daniel Wheeler, a friend of his father, was about to pay a missionary visit to the South Sea Islands, and William thought it might be practicable to accompany him; but he soon became convinced that his father's life was too uncertain to admit of his leaving home, and filial duty and affection led him to abandon for the present all idea of foreign travel. To the cousin who frequently lectured him, both seriously and playfully, for his fancy for roving, he wrote as follows :—

"I do indeed find my place to be by my father's side, and not in the 'Bay of Islands;' and I hope I may keep my place in this respect at least, however I may fail in other duties. Had I not been convinced how the case stood, I should have been more seriously bent on carrying my point, for I still think that under common circumstances it would have been of the highest advantage to me to have gone abroad; but with my father so delicate and advanced in life, I have done much better to stay at home. Besides, I am the child of his old age, and he has therefore the more peculiar claim on me.

"You say that 'cultivating the mind is not neglecting our duty.' Whether it be so or not entirely depends on the crop we are rearing. E. A.[1] the other day enlarged very beautifully on our first parents having been placed in the garden 'to dress it and to keep it.' Now if I introduce into the garden of my mind all sorts of wild plants, to the exclusion of what may be called 'the olive and the grape,' will not such a cultivation be a neglect of duty? I find, by seeing the effects of science on the most learned naturalists of the day, that the utmost knowledge may be accompanied either by deep humility and piety or by insufferable arrogance and hardness of heart. 'To look through nature up to nature's God' may be good in *poetry*, but is by no means an obvious effect of knowledge in *fact*. Yet what is more beautiful than to see a man who has

[1] A minister of the "Society of Friends."

pushed knowledge and discovery to human limits, viewing his labours with 'childlike humility' and simplicity? What if I use the epithet 'Newtonic' instead? Newton's was indeed a rightly cultivated mind, which produced a fine harvest of duties performed. How many a fruitful olive-plant is almost choked with a quantity of wild convolvulus! But there is room enough for the convolvulus to twine itself among the rose-bushes and brambles without doing harm. Why then does it fasten itself on the poor olive? Alas! why should I pursue the allegory."

To J. Fennell, Esq.

Ashbourne, March 12th, 1834.

We have very entertaining lectures just now going on in chemistry by Professor Davy, a nephew of the great Sir Humphry. I attend them, and feel something of my old chemical fire revive. Some very curious facts relating to electro-magnetism have particularly delighted me, especially the vast magnetic power of the voltaic circuit. I purpose giving up one morning every week to chemistry. Botany can well spare this much time to her intellectual sister.

March 19th.

If I can leave home a mine of business awaits me in Dr. Hooker's herbarium, both in exotic ferns and American mosses. True, that I am not "au fait" at the latter, for I scarcely know twenty of them, but it is to gain knowledge that I commence writing on them. Do we not write essays at school?

When I began to write on algæ I scarcely knew one tenth of the British species; but as I wrote I gathered knowledge, and found it the pleasantest way, for you have thus two zests at once—the pleasure of acquiring and the pleasure of imparting knowledge. 'Tis in at the ear and out at the fingers' ends all in a moment.

I hope thy relish for science is not given up, and that thy leisure time is spent—*as I would say*—profitably. How various are the meanings of that word! After leaving Clonmel is it to be "otium cum dignitate," or business? My otium days, I fear, are over; and now I must stick to the desk. However, we live in hope, and while I have the mornings and evenings to pursue

my studies I must rest contented. How many illustrious men never had half of my opportunity! After all, what is science? what is knowledge? Vanity. I often laugh at my folly, but 'tis comfortable to find one's follies less contemptible than those of one's neighbours.

Apropos of the love of knowledge, thy reason for not attending Professor Davy's lectures appears odd. Surely the pleasure of gaining something, however little, even with the probability of never learning any more, ought to be a sufficient inducement. Tastes might have been awakened in those few hours which would have altered the whole tenour of thy life. What straws govern us! Good-bye, and be a better boy in future.

To Robert Ball, Esq.

May 24th, 1834.

Are you still for Connemara? Pleasant weather this for bog-hopping. I cannot go. I am tied to the desk. Am I right in reading that Taylor, Scouler, and Mackay are to be of the party, or have you only consulted those worthies? Certes Scouler, whatever he may know of the north-west coast of America, can know but little of that of Ireland; but he would be a right excellent addition to your party.

Pray take with you some bibulous paper, some white and some boards, and gather algæ at *Arran*. You will surely find something good. Pay most attention to the red kinds, which on that limestone shore with its western longitude ought to be very fine. I wish I could be there with you. I long to be poking at them. Take notes of localities along the coast, and pay attention to the matter of quarters, which would be welcome information if I should ever have time to take a trip there. Note also the places where the sea-coast is limestone, and where slate or trap. This knowledge is of vast importance to the algologist, for though the roots of sea-weeds appear less designed for furnishing nutriment than those of other plants, yet there is a wide difference in species on different kinds of rock.

I rejoice to hear that Miss B. has turned a questioner of authors' accuracy. 'Tis the best possible sign of confirmed madness. She is surely *bit*. Urge her to work hard this summer, for I want some new things for Mackay's "Flora."

The year 1834 was destined to be one of the most important in Mr. Harvey's life, bringing as it did events and changes deeply affecting his future prospects, and which seemed to bear him at once further beyond the threshold of manhood than the attainment of years was likely to have produced in one of his peculiar temperament. The first of these was the marriage of his sister, the circumstances arising from which may be given in his own simple words as written to Dr. Hooker.

"My only sister is about to be married and settled in the metropolis, and my father wishes to live with her in preference to remaining here at either of my brother's houses—and very naturally, for she has been his careful nurse these many years. Now I am a kind of addendum to my father also, seeing I am the youngest child and the *pet*, and of course I follow him wherever he goes. As regards botany the change is a happy one for me, for I shall at last have some persons within reach to sympathize in my pursuits. As regards other feelings it is also happy, for I should not like to separate either from my father or sister. The only drawback is, that my habits of business just now beginning to be formed are nipt in the bud, and I shall probably be again unsettled. But I trust I may not be long so. I have lived in idleness long enough, and am growing fearfully old to be still without settlement. I am determined not to continue much longer so; for after all there is no old age so miserable and heartless as that of a drone, who is a bore wherever he intrudes. My *horror* at such an old age grows stronger every day."

The above arrangement, which proved so satisfactory on both sides, was but of short duration. On the 18th of the following October, Mr. Joseph M. Harvey was suddenly removed by one of those attacks to which he had been for some years subject. The shock was instantaneous, and on William the stroke especially fell. He accompanied his father's remains to Limerick; and it was affecting to witness his speechless sorrow, from which he found it difficult for some days to rally.

The following letters continue the narrative.

To Miss F.

Limerick, November 11th, 1834.

As to myself, my dear S., I am quite well. I know how thou hast been feeling for me, and thy sympathy is very precious. I have indeed been stripped of my chief stay, and at a time when I least expected it. It is nothing to say that the shock was stunning.

Every day I feel more and more that my foundations have been shaken, and that I am thrown on the world to stand or to fall. I have not only lost my sweet companion, my more than indulgent father, but I am deprived of my early protector, under whose wing I have so long and so thoughtlessly nestled.

Not but that I have abundance still to be thankful for—friends to love, and be loved by. I have not to dread that I shall be desolate or lonely. Surely I cannot be so while I have my sister and thyself left. How different would my situation have been had this blow come when I was younger, and less able to push my way in life!

I have often thought, and latterly more than ever, how unworthy we all are, and myself in particular, of such parents, and of possessing such treasures for so long a period. Each lived the full allotted portion of human life, beyond which it is labour and sorrow. I do not wish to ascribe *reasons* to Omnipotence, but, watching by the bedside on the first night of death, I felt that, in mercy to *him*, he was taken. He had finished his course; he had kept the faith. There was no more for him to do, and, with regard to his family, he had seen his chief wishes fulfilled. I enclose a copy of his last letter to E. A., written just a week before his death. It shows of what spirit he was to the last, and, taken in conjunction with his long and exemplary life, it is really a beautiful letter.

To Dr. Hooker.

Ashbourne, Limerick, November 12th, 1834.

My dear father's removal was indeed most sudden, but to himself, I believe, it was no surprise, for since my dear mother's death, three years ago, he seemed weaned from earth, and to be preparing for a purer and better world. Yet it was beauti-

fully instructive to those around him to see him take the greatest interest in every benevolent undertaking, either for national improvement or for the prosperity of Limerick, while at the same time it was quite evident that his chief thoughts were in a far higher sphere. Indeed, his children cannot look with other than grateful feelings on his long life of usefulness and Christian charity; and if there be any consolation in knowing that we have the sincere sympathy of all classes of our fellow-citizens, rich and poor, it is ours, for I do not exaggerate in saying that our loss is a public one.

My feelings are those of one who has had his foundations suddenly swept from under him. Notwithstanding that I have a sister and affectionate brothers, I cannot help feeling that my guide is gone, and I must now stand or fall by my own counsel. No earthly arm can supply the place of that I have lost.

My stay in Dublin is now suddenly closed. I am unwilling to enter into any mercantile speculation in the present strange times, and have long had a strong desire to see tropical climates, with the view of extending my own botanical knowledge, if I add nothing to the general stock. Now I am well aware that, unless when young, I shall never set out. But I am not rich enough to go touring round the world, spending here and there. If I go abroad, it must be in a way not to return poorer, if I do not return richer.

I have been reading Dr. Lang's history of New South Wales, in which he holds out fair hopes to persons like myself of moderate means. I am induced to look to this colony on account of the governor, Sir Richard Burke, being a most particular friend of our family, to whom I could always look up, and so should feel less from home than almost anywhere else—not to speak of the peculiarity of the natural history, and its being the country of Brown. Pray give thy opinions as to my plan, for on this step will doubtless depend the success of my whole life. I would therefore be cautious in casting the die.

His doubts and anxieties about his future destination were, however, most unexpectedly removed. One of his brothers was offered the appointment of Colonial Treasurer at the Cape of Good Hope, and it was at once decided that in the event of his acceptance of the office William should accompany him.

Thus were his ardent desires fulfilled and a new era opened in his life. The following confidential letter to Dr. Hooker relates the event and his feelings with regard to it.

To Dr. Hooker.

Morley's Hotel, London, 11/25, 1834.

My dear Friend,

Thou wilt be surprised to get a letter from me from London; but this world is such a whirligig, that I have determined henceforward to be surprised at nothing. After my last letter was written I had much consultation with my friends in Limerick, and seriously weighed the pros and cons of Australia. Their final opinion, which agrees with thine, was, that I should go out there merely on a botanical tour for two or three years. As to a permanent residence there, I never contemplated such a thing. I certainly should be strangely hard-hearted to cut my numerous friends and relatives in that outlandish manner. But circumstances have since occurred which have put my Australian trip out of my head for the present, and put another in its stead. Just before the Whigs left office, a high official situation at the Cape of Good Hope came into the gift of Rice,[1] who at once nominated my brother Joseph to the appointment. I need hardly add that I go with him. To be sure, the Cape is old ground. Its botany, though beautiful and interesting, has not such charm of novelty as that of New Holland; but we cannot have all our wishes. Is there a "Flora Capensis?" I had long indulged the hope of writing a Flora of New Holland or New Zealand, but now I must rest satisfied with one of the Cape.

I shall probably be detained a fortnight in London. Pray enclose me an introduction to Brown. If Bicheno be in town, I can get letters from him to the other botanists.

To a Cousin.

London, Morley's Hotel, December 1st, 1834.

Having just returned from my first visit to "the greatest botanist in this or in any other age," a visit of three hours, and not being disappointed in my expectations, I must give you the benefit of my lucubrations. What weak creatures we are! Nay, I was not grievously abashed, but actually felt more free

[1] Mr. Spring Rice, afterwards Lord Monteagle.

with him than I have often felt in company which I thought measurelessly less about. He is tall, slight, and *apparently* about fifty years of age (he must be more); quite grey, but not bald, full of youthful vigour and strength of intellect. His eye is usually dull and unremarkable, but when he speaks and wishes to convey his meaning, it is full of depth and power, showing a remarkably shrewd, sharp observation; his voice low, and his mode of delivery careless and *dripping*—an odd expression—but I mean to say, like the uncertain tinkling of water—not a continued flow, but now strong, now small. He certainly struck me as the most learned botanist I have ever come across; but this not by any display of knowledge on his part, but by chance observations that let you into his knowledge without himself seeming to know it. First we talked algæ, of course. These he had studied in his early days on the coast of New Holland and on the north of Ireland. His knowledge appeared at once clear, comprehensive, and minute. I do not mean his knowledge of the present state of the science, for as to names and systems as now adopted he could not be expected to care much. But of what he had known then he appeared to have a clear remembrance, even of species. He showed me the famous *Claudea*, and some other highly curious things. He has not many algæ, but all those he has are the most wonderful and rarest of the tribe. Many are unpublished, and will probably continue so till his death. We talked of ferns. Immediately he began to speak of the elastic rings of the capsules, of the forms they assume in different tribes; on the reticulation of the seeds considered as generic character, and of the venation of fronds. On all these he made many observations which could only strike one who had deeply studied the subject. I felt myself miserably superficial. I mentioned a genus of mosses. Instantly he spoke of the curious structure of the cellules of the leaves, &c., &c. No matter what subject we started, he fastened on the very inmost part of it. He showed me a large collection of fossil woods, many of them highly curious and beautiful. These he has dissected in the most exquisitely delicate manner, so that the most insignificant vessels can be distinctly seen under the microscope, and the fossils are cut so thin that they allow the perfect transmission of light. I cannot enter into all he said and showed of the little vessels in these antediluvian vegetables, but

I may say that in one specimen he has detected a byssoid fungus, which had grown on decayed wood, and had been *petrified* along with the wood it grew upon. Thus one of the most fugacious of plants has been preserved in statu quo for thousands of years. He showed me the *Rafflesia,*[1] and told me he was about to publish a paper upon it. All his papers are considered botanical gems. Then he talked of the Cape. I told him of my thoughts of settling there for some years, and of writing a flora of the colony. He said, some of the pleasantest botanizing he ever had was on Devil's Mountain, near Cape Town, and he thought I could not pitch on a more delightful field of study. Though the ground be trodden there, there is much to explore and to revise. I may reckon, he thinks, on fully five thousand species. Pleasant work!

To the Same.

Hanover Street, Hanover Square,
December 8th, 1834.

Here I am, sitting by myself, nearly eleven o'clock at night, and up two pair of stairs, in a snug little parlour, with a cheerful blazing fire, and a pair of wax candles—my candles and landlady (on canvas, luckily) looking down most smilingly on my labours—myself sitting, I should say, in a half-lolling posture, in a fine, soft easy chair, my feet resting on a soft, curiously-emblazoned rug, and enclosed in a pair of new Morocco slippers. Altogether a picture for a painter to study. Well, I can live very well at the Cape, I guess. Who cares for society? Oh, wait till I feel the want, you will say. Well, wait, say I.

I have been at a fire to-night—a fine scene. Not the Thames, however, though somewhat near it. I was going to take tea and to sleep at William Christy's,[2] in the country. He has a warehouse in Gracechurch Street. I went there to meet him; but just as I reached it I saw flames and smoke, with showers of sparks. His warehouse escaped, his neighbour's was burned—and a famous flame it made. The remarks of the bystanders, taken down, would be amusing. Pity, fright, and grief, rapidly

[1] Rafflesia Arnoldi, an extraordinary East Indian plant, discovered by Dr. Arnold; fungus-like and of huge size. See "Life of Sir Stamford Raffles."

[2] This gentleman—an amateur botanist, and brother to Henry Christy—was a well-known archæologist.

varied with *pleasure* and exultation, and as each roof successively fell in, the crash was hailed with *cheers*. Nay, it is not unnatural, for at the bursts of sparks and many-coloured flame, one could not but feel strong admiration, and admiration must breed pleasure. Oh, the insurance company are able to bear it all!

Nothing new about the administration of public affairs, or the hopes of private ones. There is much difficulty in forming the government; and many days, if not weeks, may elapse before the arrangements are finally settled. Touching botany, I spent a pleasant evening yesterday at my friend Mr. Ward's, to whom W. Christy took me. He has been most successful in his method of growing exotic ferns in glass cases. Our own little *Hymenophyllum* was growing in the most charming luxuriance, and had extensively spread over a rockwork—a most difficult plant to cultivate, it is so impatient of drought. I was quite enchanted with a parcel of Cape plants Ward showed me. You can have no conception of the beauty of some *Gnaphaloid* things—not true *Gnaphalia*—I forget the genus. They would make any one in love with *Compositæ*.[1]

To-morrow I go to Lambert's levée of botanists, and on Monday I hope to see Kew Gardens. I wish I was done with London. Yet why? Where is there more to see? I thought of killing time in Devonshire.

To Dr. Hooker.

Dec. 12th, 1834.

I have been twice to see Brown. He was very kind and civil to me, and I am pleased to know him personally. I give him full meed of admiration for his profound learning and extreme acuteness of remark. This was apparent through every word he said. I shall call on him again before I leave town, but I do not like to *bother* him by too frequent visits.

I have despatched the letter to Cunningham, but have hitherto been prevented going to Kew. I fully intend going there on Monday next—at any rate not to leave London without making his acquaintance.

[1] Since these pages were placed in the hands of the publisher the editor has heard with deep regret of the death of N. B. Ward, as recorded in the "Athenæum," June 13th, 1868. He died on the 4th of June, at the advanced age of seventy-seven. He took a lively interest in the preparation of this memorial of his friend.

I dined yesterday with Mr. Ward, a botanist not perhaps unknown by thee. He is very zealous and ingenious, and has an herbarium of about 25,000 species. He is particularly fond of ferns, and indeed of all *Crypts*. He has been trying experiments in cultivating ferns and mosses, and in the former has succeeded to admiration. He finds that many *stove* ferns succeed in the smoky atmosphere of *Tower Hill*, and require far less heat than is generally supposed to be necessary for them. In fact he gives them no artificial heat at all. His plan is to keep them in an excessively moist atmosphere, by preventing the escape of vapour. He actually grows them in glazed boxes hermetically sealed, and leaves them undisturbed for six or eight months together. Nothing could flourish better than those I saw. In those sealed boxes he has had some excellent parcels of live ferns from Van Diemen's Land, which arrived in perfect health and vigour. He hopes to succeed equally well with exotic mosses, and I see no reason why he should not. Another experiment he has *under process*, but I fear with small hopes of success, is growing mosses which had long been dried. I don't see why the seeds of mosses should not revive as well as those of ferns; and should he fail in his attempts at the old stems, he may in this way hope for young ones.

From Plassey, where William spent the Christmas of this year, he writes thus to Mr. Fennell.

23 Dec., 1834.

. . . . . If thou hast still any pleasure in the "amabilis scientia" thou wilt be pleased to get the enclosed specimens of *Pinguicula Alpina*, one of the loveliest and rarest of British plants. I have just received it from Dr. Hooker. It grew on the mountains of Ross-shire. It is figured in the "Suppl. Eng. Bot." I have this year added a new *Potamogeton* to the British Flora, *P. prælongus*. It grows in plenty at Castle-Connell and Plassey. It most resembles small specimens of *P. lucidus* in appearance.

Dr. Hooker has presented me with a copy of his "Musci Exotici," a beautiful book, in quarto, with nearly 200 coloured plates. It is a most valuable present. I have just got a parcel of Peruvian plants, among which is a dried specimen of the wild *Solanum tuberosum* (potato).

To N. B. Ward, Esq.

DEAR SIR, Dublin, January 29, 1835.

I avail myself of the opportunity of a friend going to London to send you a few British algæ, which are not so well worth the carriage as I had expected when I promised them ot you in London. But my stock of many species is exhausted, and I have scarcely replenished any this season.

I ought to have told you, when we were looking over those Cape plants at your house, that I expected shortly to sail for the Cape; but at that time my plans were only half formed, and so I deemed it best to say nothing about them. I may now tell you that I expect to sail with my brother's family in a few months, and that I shall probably remain in South Africa for some years. Natural history, *particularly* Botany, and *especially* Cryptogamia, will probably be my chief amusement, and it is quite likely I may visit different parts of the colony. If you will allow me, I should be glad to open a correspondence with you; and if you will but give me plain directions for making and packing your live plant cases, it will give me very great pleasure to send you home our best ferns and mosses in this way. The Cape ferns, you know, are nothing very remarkable; but there are some beauties, and I confidently look forward to discovering many more. Of mosses and *Jungermannia* I ought to discover at least 100 new species, and of my favourite *Algæ* my harvest should be still more fruitful.

If you will be good enough to write me instructions for the packing cases, I shall be glad to hear from you.

I am, yours very truly,

W. H. HARVEY.

To Miss F——r.

1835.

I do beg, if you will persist in making me out a genius, that you will keep your mind to yourself—at least refrain in your letters from any more *tablespooning*. I have often told you before how disagreeable such matter is. I know my own powers and their *full* value. I am quite enough inclined to vanity without your assistance. You praise, however, with such preposterous lavishness, it really makes me disgusted with myself, and as if I was appearing to others what I am not. I hate to have "powers of

mind," &c., brought up to me on every occasion. It is tantalizing to be congratulated on what I do not possess. If you had the jaundice, how would you like to be praised for your good looks? So, for charity's sake, let this matter rest for the future.

To Mr. J. Harvey, New York.

Dublin, February 10, 1835.

Well, what of the Cape? To me the prospect, though not *monetically* speaking bright, is one of much pleasure and profit. I look forward to many charming discoveries in that beautiful part of the world; and if I do not achieve wealth, at least I hope for a moderate competence.

It is an old saying, A man does not change his mind by crossing the sea—I forget the Latin, and who said it—so 'tis yet to be proved whether the atmosphere of South Africa will have sufficient vivifying effect on my capacity to cause it to *germinate* handsomely. Botany is a *bore!* What a pity to be chained to a science which empties the pocket continually, and never returns anything thereto. To the mind, it is true, it does return a vast amount of pleasure, and a sparing quantity of instruction. I wish we had stomachs like butterflies. The caterpillar very properly has a stomach which almost fills its whole body, but no sooner does it cease to crawl and has got wings, than this organ shrinks to a very small space, and never afterwards requires more nourishment than a few drops of honey. How convenient would such a formation be for a botanist. He might then defy the frowns of fate, and add interminably to his stores. Interminably! I forget *Death.*

While the preparations for the voyage were being completed, William paid farewell visits to his friends in Ireland, and also to Dr. Hooker, in Glasgow. Of his school haunts, he writes to a relative:—

"Newtown is much as I left it. Saw the old ground, and thought of Gray and Eton College. Though I care not for place associations, yet I did, I confess, go over the locality with pleasure. I saw my old garden—the ground the same, the plants changed, like their owner—Ballitore empty. 'Within a few years' little range, oh, what a change!' Six years since I saw it. The fox cover is full of lovely fungi, and one, the

curious *Phallus*, is flourishing in precisely the same spot I used to gather it. Strange that things so brief should haunt a fixed spot. Send me a moral.

To a Cousin.

Glasgow, March 11th, 1835.

Were you here you would be oppressed with the immensity as well as with the vanity of human things. Surely, after our lives being spent in the pursuit of knowledge of all kinds—What is it all? Empty possession. But this is foolish. However, it is a natural thought, and obvious to me, in the midst of countless books and plants, many of them covered thick with the dust of years. But I am not frightened or discouraged, and why? I comfort myself with the thought that if I am a fool all the world are so also—and we must needs have some folly to pursue as an amusement. While in the world we cannot be idle. Botany is a very pleasant folly, and as such I pursue it. Dr. H. and I have been sorting lots of ferns for the last week, and only got them into a rough state this day. We are now busy selecting collections from them, one of which I shall bring home with me. Dr. H. has given me a copy of his "Icones Filicum," in folio, with 240 plates, a charming work. It was quite as unexpected as it is a valuable gift. The cost is 15*l.* The expense hitherto prevented my buying it.

I have got 140 species of Peruvian plants from Matthew —many rare things among them. I have also subscribed to a man going to Columbia, a country hitherto very little known, and producing many extraordinary things. A new Irish plant has been discovered, a scirpus (*S. Savii*). We must try and find it in the Andromeda or Parnassia bog. It is a shame to Irish botanists that it had to go to Switzerland for a name. It has been in Dr. H.'s herbarium nearly twenty years, where it was overlooked and forgotten—an instance that the human mind cannot be stretched beyond a certain tension. I have just ordered a frightful lot of books.

To J. Fennell, Esq.

Portsmouth, July 9th, 1835.

So it is come to this at last. I write at the Fountain Hotel, and hope to sleep on board the Carnatic to-night, and

then, vale—longum vale—to my native shores. I am in spirits and merry, yet it is a serious undertaking; but as yet I have scarcely looked upon it in this light. Surely I shall have time to think of this at sea. Look back five years, and who should have thought that one of us would be building a house and the other about to start for Africa? Hast thou read the story of the *three* Westminster boys? Being true, it is very interesting. They were Warren Hastings, Lord Thurlow, and William Cowper. They sat side by side on the same form at Westminster School, but how varied was the aftercourse of their lives! The renowned Governor of India, the stern Lord Chancellor, the poor weak-minded Cowper, who, with all his misery, was perhaps the happiest of the three, and has left the purest fame for posterity. Well, I did not mean to run on in this way; but when I remember how we were brought up together, and are now about to separate, with very different destinies, I cannot help thinking how we may meet many years hence, and what will be the current of our lives. Probably in every respect different.[1]

The day before I left London I enjoyed a sight too beautiful to be seen twice in one's life, at least such as I never expect to see again. What was it? Malibran or Grisi? after whom the whole world is running mad. Paganini? nay, verily. But it was Archibald Menzies, in his eighty-second year, and as fresh and hale, as much alive to the *innocent* enjoyment of his youth, as he was sixty years ago. He was round the world with Vancouver. But for the white hairs, I might have thought I was talking to a young man. I could not keep my eyes from admiring him. There is no apparent weakness, or slowness even. His pleasure is to give others pleasure, and there are few more capable of doing so. I regret much that I did not call on him sooner, for I shall probably never see him again. He wanted me to spend a week with him. We are just ordered on board. Farewell, and be happy.

[1] Mr. Fennell settled on his property, and farming became his occupation, but exposure to cold produced disease of the lungs, which made steady though lingering progress, and his death preceded that of Dr. Harvey by about seven years.

CHAPTER III.

VOYAGE, AND SIX MONTHS AT CAPE TOWN.

THE Carnatic sailed from Portsmouth on the 12th of July, and entered Table Bay on the 17th of September. The following extracts, taken from a journal kept by Mr. Harvey during the voyage, and addressed to his sister, may be interesting to the reader as characteristic of his mind during this period.

July 23rd. After breakfast we were amused with the first shoal of porpoises we have yet seen. "Happy living things," as dear Coleridge would say; and happy indeed they looked, bounding from wave to wave with prodigious activity. They compare them to pigs, but I never saw such graceful joyousness in pigs in my life. They came from leeward, and passed off to windward. If what sailors say be true, this ought to betoken a change of wind, for they are said to come from the direction in which the wind is about to spring up. Mother Carey's chickens (*Procellaria pelagica*) were flying about us many times to-day, and we have seen them on two or three days before, though I believe I forgot to notice them. Poor birds! But I believe it is false sentiment to pity them, for doubtless they are best fitted by Providence for the stormy life they lead; but, for my part, I would not be a Mother Carey.

July 27th. Lat. 36° 30′ N., long. 17° 7′ W. The weather begins to grow ambrosial; the seas are blue, the skies clear, or thinly clothed in fleecy clouds, and we move along, not very rapidly, but steadily and smoothly. On the whole, we are more resigned to the sea. This morning the thermometer was 70° in my cabin, and fell not during the day. I bask, and say nothing, for I have made up my mind to enjoy heat as much as possible, for how else can I be contented in my new life, if I

do not try to acquire a taste for the atmosphere I must breathe. Were I going to the North Pole, I should doubtless strive to admire cold, though, to say the truth, I never had much drawings that way. There are a great many different kinds of content, some arising from praiseworthy sources, and others springing from hills of less purity. Mine are mixed with the waters of the latter, I fear, for in my contentment I believe there is no small portion of inertia.

August 1st. Lat. 24° 18′ N., long. 21° 8′ W. This day is notable, not only as being that whereon a monarch formerly was wont to chastise his helpmate, but is distinguished in my history by entering for the first time the torrid zone. A few days ago I spoke of a swallow; to-day a poor wanderer, the same I presume, kept flying round the ship, but it proved to be a *martin.* He entered the cuddy many times. Poor fellow! Where can he find flies? It was proposed that the ladies should employ themselves collecting cockroaches, and stringing them on threads for suspension in the shrouds, to serve as a substitute for winged things to our swallow.

August 2nd, Sunday. Behold the commencement of the fourth week of our captivity. To-day we had service on the quarter-deck, under the awning, to much satisfaction. Mr. Baker preached an excellent sermon, very well adapted to his auditors, on the words of the jailor to St. Paul, "What must I do to be saved?" He addressed himself chiefly to the sailors, and they listened very attentively.

August 3rd. I wonder much that I have never read "Cowper's Letters" before. To-day I took them up, and it was long before I could lay them down. Such variety, sad and merry, fanciful and profound; really he is the most delightful letter writer I know. And the pictures that constantly occur of his mode of life in his much-despised retirement are to me "nuts and apples." Oh, that at the end of *my* wanderings I may but find a Mrs. Unwin, and such a fireside! It is rather too soon to think of such arrangements, but I think even now I could name one. As to any other home for my old days, I mean any closer connection than that of friendship, I do not seriously look to it. I am not qualified for the head of a family. A happy, dreamy life in the heart of the country, moderate means, a little garden, a small library, and one or two old *cronies;* you have now the

extent of my humble wishes. I look to botany as a sure protection from low spirits, far superior to Cowper's "winding thread." I don't know but that his classical taste (in which I am wonderfully deficient) may have afforded him a more intense, though not so *constant* an enjoyment. Botany is useful, because you have always plenty of novelty to turn to, always something to do, either in the arrangement, dissection, determination, or description of your plants. And if you have not, the mere admiration of those delicate works of the Creator always affords me great pleasure.

For the rest, you may abuse this luxury as you do many another, and the natural bent of the human mind is perhaps fully as much to abuse as to use its blessings; but are we therefore to renounce these blessings entirely? Off then at once to the desert, put on sackcloth and ashes, and flog yourself six times a day. I do not envy you.

A fine bright moonlight night, and a balmy atmosphere. Singing on the poop. This is the pleasant hour of the day, but like many other pleasant hours, it leaves scanty points for the journalist. To the sailors it is also a merry time. This evening they had a dance, affording abundant amusement to us as well as to themselves. For lack of fiddle the cook produced a tin dish and iron spoon, and you cannot think what "eloquent music was discoursed" by the humble instruments. It is doubtful to me if the primitive turtle shell spoke better.

August 4th. The sailors caught a bonita; and I saw two black gulls winging their solitary way across our bows, happy, doubtless, in having any companionship in such a waste of waters. The bonita, which is cousin to the porpoise, is a very pretty fish, of an elegant spindle form and brilliant blue painting. This specimen was about two feet long.

Doubtless it must give double pleasure to benevolent minds when their own enjoyments, even unconsciously, give equal pleasure to others. This remark springs from the amusement I have been taking in the contemplation of D——. This was a moonlight evening, and though the cuddy was lighted up and the viands displayed, yet all the passengers were either enjoying the balmy air of evening, or in their cabins. *All!* No; there was one exception, which I was happy in discovering, and contemplating unobserved. I had been on the poop, was wearied,

and descending, advanced towards the cuddy door, which is glazed. There a scene presented itself which I would I had the power to embody as it deserves. The lamps shed a strong but mellow light. D—— sat at the cuddy table facing the door, mixing brandy punch. Now he would look up wofully to the ceiling, then wistfully at the glass, then benevolently smile all round the *empty* room, then cross his hands with a look of imbecility. Again he would look up and spread his mouth into a wide but *soundless* laugh, apparently in enjoyment too deep to be controlled, and forced thus to vent itself; then take a sip, rub his nose, settle his spectacles, look up, look down, and all about, and then laugh, laugh with a truly beautiful expression. Long I stood regarding the pleasing prospect. No sound was uttered, for he had no communicant; he was alone, he and the brandy, the sugar, and the water. Yet how sweet was the companionship between them! Silence is often more eloquent than words; his was truly so.

August 5th. "And when I awoke it rained." This was the experience of one formerly, and to-day hath it been ours. The world abroad presented a melancholy picture; a failing breeze, a falling shower, and a dark, dull, heavy sky, with a close, warm, thick air. Now you feel our situation. At dinner, however, the acme of distress was felt.

"Down fell the rain
With might and main,
The ship was in a flood;
Down dropped the breeze,
And on the seas
Immovably we stood."

Can you fancy a more comfortable predicament to be in? *You* never saw rain; no, never. You may have seen and felt a *shower*, a dropping from the sky; but to pour in full fury as a tropic waterpot, you know nothing of it. First came dense myriads of large drops as thick as they could be *sieved* out; then between these came down another set, so rapidly yet so distinctly, that they catch the former, and burst upon them, so as to make a spray. Then you have pouring rain and mist together. Thick work this. But our knowing ones make light of this heavy affair. "Wait a while," say they; "this is but a poor sample of what happens in the solstitial latitudes." "Oh,"

said I, to Joseph, "I fear we have lost the Trade." "True," replied the punster; "if we cannot *raise the wind* we shall not be able to carry on our trade." How strange that we can thus jest on our worst calamities! But we have for the present lost this pleasant wind; the showers of to-day have completely taken it from us. Flapping sails are a sad sight. D—— is the only one whose happiness is now under weigh—for ours—it is under *weight*. Dark and heavy as was the day, "grimly gathering blackness" as was the sunset, the night was balmy in the extreme. Could you vaporise velvet, mix it with moonlight, and heat the mixture to 76°, you would make a compound like our atmosphere.

August 6th. How beautiful is a morning dressed in calm, bright sunshine, after such a day as yesterday, though we mourn the buried breeze. "We ought to see a shark to-day," said some one. "Yes," replied Evans, "there was one haunting the vessel an hour ago." Shortly after a cry of "A shark! a shark!" resounded from the poop, and soon all eyes were bent over the stern to watch the motions of our destined prey. Ladies and gentlemen, children and grandsires, all with a common eagerness bent their eyes on the monster. He followed close upon our heels, attended as usual by about half-a-dozen pilot-fish, the prettiest little things you ever saw, about six inches long, and beautifully barred with bright blue and black; no mackerel was ever more beautifully dressed. These benevolent little fishes swam close before the monster's nose, ready to inform him of any prey which might be in view, for, from the position of his eyes, he cannot see objects floating on the water. First we flung him out a roll of brown paper; the pilots darted at it, smelled, and let it float by. Next a nice piece of *pork* was fastened to a strong hook, and that again to a double line (for we could not afford to give pork for nothing), and flung over the stern. It would appear that the pilots gave a more favourable account of this savoury morsel, for *sharkey* made a snap. Our fisherman was too quick, however, in pulling, so after a flounder or two the brute left us. But we were by no means tired of him, nor was his faith in us much broken, for he followed on, and we determined to follow up. Again the line was thrown with more dexterity, and the bait drawn backwards and forwards through the water, when, just

opposite his nose, our boatswain slackened fast, and let it run temptingly to the mouth. A snap, a swallow, and the hook stuck fast in his jaw, followed by a shout of exultation from all the hunters. After playing him awhile, he was brought close under the stern, when a stronger line with a noose was let down and slipped over his body. It caught him "in medias res," and he was hauled out of the water, and exposed dangling in mid air to the admiring spectators. Of Miss G. it may be said, terror as much as pity at this moment seized her, for he swung backwards and forwards opposite her cabin window, every moment threatening to swing in holus-bolus. And what a mess that would have been in a lady's room! But fears were idle, pity vain. Another noose was fastened to his tail, and thus entrapped, he was dragged along through the water, "now no more his home," to the bows, where he was hoisted, till he reached the forecastle. Thither we all went. Having been duly displayed, and his eyes damned by the sailors in quaint terms, the butcher approached with his knife. He was not slow in using it.

I proceed now to open his *stomach*, for it is always a matter of curiosity to know what delicate fare has lately occupied such a palate; and surely this won't disgust you. What do you think we found? Nothing but the intestines of a sheep that had been heaved overboard this morning, and the cook's apron, which he had lost two days ago. Truly we laughed when this latter delicacy was produced, a good, strong, sail-cloth apron. I had read of such things before, but I little thought ever to see them. Now the history of the shark is completed, save to add that he was fried and eaten. Some declared that it was as delicate as a sole. For my part, I thought I could taste the smack of the *apron*, and so I did not fancy him much. Sailors will tell you it is lucky to catch a shark, for it will bring you a breeze; and so we found it in this instance. May we ever catch a shark when becalmed, say I.

Night is the test of the tropics, and it was 79° in my cabin. However, hot as it was, I dreamed that I was botanizing in Greenland and Kamtschatka, and was wofully disappointed to find it all a dream, for I had discovered many new and beautiful plants. Let me, however, take this dream as the shadow of coming events.

August 8th. I begin to feel the weather very oppressive,

and shrewdly suspect that Nature has not given me a frame fitted for the tropics, at least not for such tropical weather as this.

August 10th. Several dolphins played round the ship this morning, but we caught none; they were of a rich green colour, very lively, and glanced beautifully in the sun. I must now introduce you to "Old Wives," of which we caught two. They are not beauties. Ours were of a dull colour, about twelve or fourteen inches long, grey, with blue spots; a horn out of the back, and two large fins near the tail; a very small mouth armed with strong teeth.

August 19th. I lie on my sofa and read; but my readings begin to be mixed with anxious longings for the free shore, for to me the shore and not the sea is the "ever, ever free." Perhaps these longings have been fostered by reading descriptions of African scenery. Well, it seems strange to think that (with the blessing of Providence) in about four weeks I shall tread the ground of my new home, and open the field of my future labours. What these labours may be is sometimes a matter of serious consideration. I often wonder what the design of Providence is in bringing me out here in a manner so thoroughly unexpected, unpremeditated on our part, for I doubt not He has some beneficent object in view, though it is yet hidden from us.

August 27th. It is perhaps rather soon to commence reckoning the days till our deliverance; but it is difficult at times to avoid such foolishness. For my part oftentimes an intense desire for land comes over me, it may be at mid-day or at the dead of night, and then an inexpressible impatience pours down on me with a resistless flood. Oh, vegetation, vegetation! how I shall luxuriate in thee when restored to thy acquaintance! It is strange that mere plants should have such a power over one —but they have.

August 29th. What a notable day this has been! When I came on deck many were looking eagerly on the horizon. I joined my eye, and looking westward I espied a something in the sky.

> "At first it seemed a little speck,
> And then it seemed a mist,
> It neared, and neared, and took at last
> A certain shape, I wist."

But it was not quite so terrible an affair as that proved to be which is celebrated in the above lines, for it passed us very innocently, or rather *we* passed it. Now it was only a three-masted ship, with a good substantial hull, not "barred like a grate," and I don't think I should have mentioned it, but for what followed.

"At length did cross an albatross,
Through the fog it came—
As if it had been a Christian soul,
We hailed it in God's name."

It did not come *through a fog*, however, but across a clear atmosphere, over a billowy sea, sailing swiftly and majestically.

September 2nd. About sunset a great fleet of porpoises came dancing round us in beautiful fashion. They appeared chasing one another, and leaping out of the water at a considerable height. Between ourselves, I think them a different species from the porpoises of our own seas, being lighter coloured, and more slender in proportion to their length, but the *knowing ones* called them *porpoises*, and it is not civil to contradict, when you cannot *prove* the truth.

Evening is gone. Night is come. What! Is *that* the Southern Cross? I do hope, for the credit of whoever named the stars, that I have been misinformed; for if this be the glory of the southern sky, it is poor indeed. You might as well call it a trapezium. I confess it is a very great disappointment to me to find this celebrated constellation so utterly unworthy of the name it has received. I had looked forward to it as something conspicuous—something glorious in the sky, standing alone by itself in the midst of many smaller stars, and shining with a pre-eminent brightness. There always appeared to me something *poetically* beautiful in the position of this constellation, set amid the darkness of the southern hemisphere, as if it were typical of the light which should at a future day beam upon that hitherto benighted half of the world. Now I am sorry that this fancy is destroyed. Not that I ever thought the stars were really placed in the sky to imitate a cross for any such purpose as I have hinted, but just because a very pleasant little dream is quashed.

September 8th. Welcome most heartily to east longitude. The last time I was in it was the Sunday before I left London,

which I spent with my excellent friend Ward, in Cobham, Kent, to much gratification. I then took farewell of English botany, and I hope in a week more to say "How d'ye do?" to the Cape Flora. No news to tell. Roly-poly all day long and all the night. I have just unhinged my sofa, and slung me a cot, and am to-night to swing for the first time. May my dreams be Elysian. Last night they were all about Coleridge, and what could be more dreamy?

September 10*th.* To use the words of an illustrious poet, in one of his divine compositions, "Hope begins to wear a sallow cheek!" Truly our hopes are now cadaverous-looking enough. Slow going onwards. Oh, for "the dull, tame shore!" A poor Cape pigeon was made to taste of death three times, and yet lived. First attempt: Mr. E. tried to choke him by pressing his chest; he gasped and yielded his limbs to passiveness, so was stowed away in a locker, for dead. Soon after I went to look at him: behold he had revived, so I choked him afresh, and left him as I thought finished off; but Mr. B. coming by, found him again resuscitated, and he choked him until he was tired, and of course thought the third time would succeed, but the unfortunate animal in a quarter of an hour was charming well again. After this who would touch him? He got a reprieve, and was sent to an empty hencoop, where he yet lies, and bids fair to see Cape Town. Haply he belongs to the spirit of mist and snow, and might prove an ugly customer to meddle with. It would be no pleasant thing to prove the distich—

> "Oh, wretch! said they, the bird to slay
> That made the breeze to blow!"

I don't want to have him hung round my neck, a weight grievous to be borne; so I shall say, Requiescat in pace.

September 11*th.* The wind blows from the precise point we want to steer for, and as long as it does so, we must be content to rest where we are, dodging about. I skinned a Cape pigeon to-day: was not that well? The poor wretch recorded yesterday was let loose to-day with a red ribbon tied round his neck. A great many albatrosses. We tried to catch them, but in vain; they snapped at the bait, but declined the hook. Knowing fellows!

September 13*th. Sunday.* This was a lovely, yea, a blessed

morning. It was such as to put me in mind of a fine calm Sunday in the heart of the country, and the people going to mass, with their red cloaks and white caps, and greeting each other with, "A blessed morning, the Lord be praised." Such an atmosphere; a blue sky and bright sun, has always an excessively pleasant effect on my spirits. It gives me a feeling of extreme happiness, and a portion of love to all persons and things. There is likewise a sense of praise and gratitude entirely unpremeditated which can scarcely help forcing itself on the mind. Different persons will be affected thus by different states of the atmosphere. Mine is the morning air, calm with bright sun; others prefer evening and a rich sunset; and I suppose others expand at noon. Now my lady-patroness might make a simile about flowers, that open at different hours, much to the purpose. The Pimpernel, the Sunflower, the Evening-primrose, I place the Pimpernel, for want of a better, as a flower for sunny mornings. I might find a more suitable one if I poked my brains.

The night was balmy and beautiful, with bright stars, and the Magellan clouds sufficiently defined to be duly appreciated. Say what you will, the Plough and Orion beat the stars of the south hollow, though there be several large isolated stars here and there, but I know not their names. You shall have an account of my first visit to Herschel and his telescope.

September 14th. This morning the chain cables were brought out of their resting place, and displayed on deck ready for action. I packed up to-day. The journalist has nothing else to record.

September 15th. We succeeded in capturing an albatross which, like a bird of ill-omen, had kept dodging about us all day.

> "'Twas right, we say, such birds to slay
> As bring the stupid calm!"

We did not kill it, however, but reserve it to a future day. He is a noble fellow, and has quite vindicated the character of his tribe to the incredulous, who had previously despised these fine birds, deeming them no bigger than sea-gulls. Sea-gulls, quotha! His wings measured ten feet and a half in expansion. His head large as ——, and his eyes strong and bright; the

plumage a pleasing mixture of brownish grey and white, softly and downily blended together. The feet white, flabby, triangular—yea, gooseform. His true place is on the wing or on the wave; on land or deck he is as awkward as a swan in a similar predicament, and waddles along as uneasily. His legs appear weak, too weak to support him in an erect posture; as to *perching* "on mast or shroud," as the poet hath it, it is too absurd. By the way, it is lucky to *catch* an albatross, however unlucky it may be to shoot one.

September 17th. The *whitest* day in the calendar, and so let it be considered, henceforth and for ever. At three o'clock this morning, just as the night began to wane, Joseph went on deck, and lo! we were within two miles of the African coast, and grim and black it looked. I came up at six a.m., and there sure enough lay the African shore, stretched far and wide in the grim twilight, and at two or three miles distance — the breakers dashing on the shore, and everything full of life and reality. The sun arose—the African sun—from a dense bank of mist, and smiled on us most lovingly. By eight o'clock we came off Table Bay, and the prospect was truly grand and noble. Table Mountain, the Lion's and the Devil's Mountains, and sundry others, spread along the sea, a very bold range. No one was disappointed—it was finer than any of us expected. I write now during a shower of Cape rain, while waiting for a fair blast to get on shore; but that cruel Table Mountain has let fall his table-cloth, and curtained the whole sky. But no matter; he was so civil as first to allow us a full view of all the wonders and beauties. Green Point, and the innumerable white cottages scattered over it; the town, handsome and regularly built, and the woods of white broom (*Protea argentea*) on the hills above. Numerous boats put off to us, and Malays, *beautiful in contour and colour*, manned them, offering oranges, porcupine quills, eggs, and crayfish! a sweet medley. I am not going to make this stupid journal a land account. It is ended when I land you in Cape Town, where I now write.

We left the Carnatic in a fine yacht. The water was smooth, the wind gentle, and we had a pleasant sail. Every now and then a huge fragment of *Laminaria buccinalis*, the glory of Cape seaweeds, floated past me, refreshing to my eyes, but I disdained to grasp at it. We landed. . . . What was it I saw

first? As usual I looked to the ground, to see what I trampled on. "Ha," said I, "is this my old friend *Coronopus didyma*. What brings you here?" I stooped down to pluck and smell it, but I gathered a stranger. I am yet ignorant what it was. . . . M. having left me, I wandered about by myself, and poked about here and there. I strolled toward one of the batteries. The ditch was dry, or nearly so, and into it I descended. Here were lots of Arum plants (*Calla Ethiopica*) just coming into flower, and it was truly pleasant to see them *in statu quo*. Moreover I found a vast abundance of a lovely yellow *Oxalis*, several kinds of *Senecio*, a beautiful upright blue *Anagallis*, and a number of other things of whose names I am still ignorant. On the walls of the fort I found a moss quite new to me, but still too young to be examined. This is my first botanizing trip, only a quarter of an hour, yet full of novelty and interest. What a charming field is about to open! May I be thankful for an opportunity of visiting it!

To Dr. Fisher.

Cape Town, Sept. 21, 1835.

I have little to say about our voyage. We left Portsmouth 12th July, and landed here 17th inst. I kept a journal, which my sister may show you when you go to Dublin; but it is a heavy production, not worth your perusal--a tissue of adventureless days, filled up with musing and listlessness.

If the domiciles we have entered into are not so comfortable as Summerville and Ashbourne, they are better than worse, and this at least is a comfort. I was greatly pleased with my first view of Cape Town; and notwithstanding the absence of many English refinements, my pleasure has risen in proportion the longer I have been on shore. Oh, Cape dust! or rather red sand blown about like dust. It is sad; but there are abundant pleasures to be thrown into the opposite scale, the chief of which are plants. Numerous are the beauties of the vegetable kingdom here, and I have already made some discoveries.

But I must tell you of our landing. How droll! When we reached the jetty it was crowded with "coolies" (porters) of every shade of colour, from the deepest jet to the lightest brown, and of all shades of beauty from Adonis to Thersites. Caffre,

Negro, Bushman, Hottentot, and Malay, with innumerable intermediate varieties. No sooner had we approached within leaping distance, than the host of oddities, grinning like baboons and jabbering like monkeys, jumped down upon us, and voraciously grabbed our luggage. In an instant all our trunks and packages were at their mercy. The ladies looked affrighted; I was measurelessly amused; and but for the colour, I could have fancied myself again among the wild Irish. We lost nothing, however.

The routine of my days is as follows, and will probably continue so for some time to come. I rise between four and five, and set out for the mountain or the shore, to botanize; return to breakfast about nine. Till twelve or one I am occupied in placing my treasures on drying papers, and the rest of the day I spend variously. We dine at six, and I then write letters, and am ready for bed at ten; and now, at half-past nine, find sleep drawing her curtains over both mind and body.

The boys are well. Tell O'Neill that I have consented to act as tutor till they find a better. Well, truly, we know not to what we may turn a hand. I never expected to be a tutor, and certainly never desired it.

The church here is new and handsome, and the colonial chaplain who officiates gave us on Sunday a good and useful sermon. The building cost 18,000*l.*, 13,000*l.* of which was subscribed in Cape Town. Call you that nothing? Building is enormously dear. A similar building would not cost above 6000*l.* in England. The Caffre war continues. Government still there. I have not heard the latest news. Farewell.

To a Cousin.

Sept. 18, 1835.

I am fairly *wild with delight* at everything botanical since I came on shore. I often thought af you this morning on the Devil's Mountain (absurd name for an Elysium of flowers), whilst picking up at every step some new or exquisite plant; nor did I among the glorious strangers despise the mosses, and on this first excursion had the happiness to add *one* new species to the Flora, albeit only a little *Phascum, tenth of an inch* in height.

I rose this morning at six, being too excited to sleep, and set

off to the mountain on an exploring excursion, bending my way towards where I saw a tempting ravine with a waterfall. Though it was bright sunshine, yet the air was cool and bracing, so I walked smartly, and soon reached the end of the town. First, I saw hedges of one of the fleshy things in Plassey greenhouse. Its African locality precludes the idea of its being a cactus. When it blows I shall know its name. On I went, picking heaths in variety, and Diosmas two or three; but the most striking objects were the Proteas, of which I gathered several. Moreover I passed through fields of our large *Briza* (trembling grass), and saw numbers of other garden things such as red geraniums and Ixias, in variety of all colours and sizes. *Orchideæ* of preposterous forms, and *Umbelliferæ;* but such oddities! Fancy a star of leaves spread quite flat on the ground, with four or five sessile flowers stuck in the centre. Polygalas various and beautiful, and Lobelias very pretty. Every blade of grass in fact had something peculiar. But I fixed on the *Roella* as the plant you would most like. It has a stem some four inches high, glandular, and numerous glandular, hairy, oblong leaves. A large single flower, white as the purest snow, sits on a slender stalk, and in the sunshine spreads into a cup-shaped corolla. Six graceful styles, of singular length. Now it struck me as utterly simple, graceful, and pure. The view from the hill was very beautiful. The bay in the foreground, bounded by noble mountains, and the town beneath my feet, white and regularly built. A very fine panoramic view of the capital of the colony and its environs. On my return found our party at breakfast, and I exhibited my spoils, to their great diversion.

After breakfast William proceeded to Baron Ludwig's, with his letters of introduction from Sir William Hooker. "The door," he says, "was opened by a little fairy of Malay blood, about twenty inches high, fine bronze colour, with black, ropy hair." "The Baron," he writes to his friend Mr. Ward, "is a wealthy old gentleman, as liberal, generous, and enthusiastic as ever lived, a man after your own heart. He has an extensive garden, laid out with a view of bringing together the plants of South Africa, not forgetting such exotics as he can get from his friends in other countries. The borders just now present a glorious feast of *Ixiæ*, *Babianæ*, &c., in countless colours and

forms. You may judge of the ardour with which the Baron pursues his favourite science, when I tell you that he has brought 4000 loads of soil, and removed 2000 of stones to and from his garden. The grounds are handsomely laid out, and walled in as well as a suburban villa near your Babylon. He has also *glass* for the tropicals. You would be charmed with the sight of *Tillandsia* growing on the trees in the open air. Now the Baron wishes very much to get some of Loddiges' good things, and I am anxious they should come in your cases; so may I beg of you to send two or three by next ship, and I pledge myself to return them to you filled with *Orchideæ*, ferns, or anything else you wish.

After mention of many plants, amongst others *Proteæ*, which he says, "I delight in; they form our most lovely shrubberies," the letter proceeds:—

"Pray tell the venerable and venerated Mr. Menzies that he shall have share of every Cryptogamia I pick up; and I need not add I shall pick up everything I see. I have a note also of those species which are wanting to his Herbarium, and shall lay them by for him as soon as I have my plants unpacked; but this cannot be for some time. I often think of my visit to him with great pleasure, and always feel grateful to you for taking me: such a sight is not to be seen every day. I question whether Table Mountain itself with all its treasures gives more genuine or purer mental pleasure."

William's constant habit of analysing his feelings and candidly disclosing them is always apparent in the letters to his intimate friends. September 22nd he writes to a cousin:—

"You will be glad to hear that I am likely to make many discoveries. The present pleasure is to me far more attractive than the after fame. There is a *purity* about it that renders it more excusable to the conscience. I mean to say that the pleasure arising from the contemplation of beauty in the works of God is less destructive to religious feeling than that which springs from the after-celebrity obtained by the discovery. Both pleasures, though in degree allowable, have their dangers; we are so prone to make idols of our blessings.

To Mr. Fennell he writes, same date:—

Sir B. D'Urban is still on the frontier, but may soon be

expected home, for to-day the bells have been ringing and the cannons firing in honour of a treaty of peace being signed with the Caffre chiefs. So ends for the present this barbarous war, but as usual, it ends in further aggressions on our part. We have gained seven thousand square miles of new territory, which is to be called "Adelaide," at an immense expense of money and life. When will this cease? Never, till we interpose a wall of kindness and brotherly love between us and the poor natives. No other wall will protect us or them, and such a wall I fully believe might be established if our rulers were willing to show full, impartial justice. I fear however the old system, modified, perhaps, will still go on, and while it does the frontier must be insecure.

So far William's bright anticipations had been fully realised, but a dark cloud soon spread over his prospects. His brother's health, which on the voyage had been somewhat affected by the tropical climate, quickly gave way on land. He was prostrated by a fever of such a character as to leave him totally unfitted for his official duties, and the physicians recommended, as the best means of his complete recovery, an immediate return to his native climate. Leave of absence was granted; but not until late in the spring of the following year could the needful arrangements be completed, or sufficient room be obtained in a homeward-bound vessel for the invalid and his family. William, though having in prospect a transfer of the appointment, the duties of which he had fulfilled almost from the time of their arrival, did not hesitate to return with his brother. The latter appeared at first to gain benefit from the sea air, but no sooner did they reach the warm latitudes than the disease returned, and he sank beneath its force some long weeks ere they reached England.

William's patient acquiescence in this disappointing turn of events, his steadfast reliance on the constant exercise of the Divine arm, and the pleasure he found under all circumstances in the works of Nature, can be in some measure understood from the following letters:—

Stellenberg, December 14.

We have not been so happy as you imagine. In truth we have had trials enough to bow stout hearts and buoyant spirits.

You will have heard of poor Joseph's illness just after landing, and how it has obliged him to retire from business, and they must return in the spring. We have experienced great kindness from the officials here. But are we not fitted in emergencies by an unseen power for what of ourselves we could not accomplish? It is not my nature to be depressed beyond due measure by the circumstances in which I am placed. I try to enjoy whatever is left me, while I have it, and endeavour to be thankful that anything is still left. I have contrived, by making short excursions in this neighbourhood, to get together a good many plants. Fortunately I have not to go a hundred yards from the house before I meet with the "wilderness" in all its luxuriance and beauty. I have made a good many descriptions, some dissections, and a few drawings. Should I be fortunate enough to remain as Treasurer when they sail, I mean to occupy my leisure in preparing for my "Flora Capensis," which I find is a book very much wanted, and one which requires to be written on the spot. Table Mountain is a fine, bold, grand rock, with an outline more remarkable than beautiful. The Blue Berg and Tiger Berg are magnificent, and except that the intervening space is as flat as a bowling-green, would make our view equal to something Swiss. This same plain is many miles in extent, and is a favourite resort of mine, though it abounds in snakes! I have made some discoveries which you would rejoice to see alive. What do you think of a new genus of *Orchideæ*, the *Calota* of Harvey, so called from *τὰ καλὰ ὦτα*, because the anther cases are a perfect miniature resemblance of the human ear? A figure goes to Hooker for publication.

December 15th.

I have just finished, for Hooker, my description of the *Calota* and of a new *Disa* with crimson flowers. I expect to have many new species to communicate, and no plants can be more welcome to me, not even Algæ. Alas for Algæ! I see nothing of them here. We are too far from the sea to make frequent excursions, and I have too much to do in the tribes on all sides to betake me to the shore for novelty. Ferns are scarce, but some are lovely and others magnificent. Look among your *dirt pies* for *Gleichenia*. You can but faintly imagine its beauty from your fragments as I see it here when I

go to Table Mountain, arching over the mountain rills in inimitable gracefulness, with the airiest branches, and the most delicate fresh green pinnate leaves. It is really an object to stand and look at, till your eyes overflow with that mixed feeling of *gratitude* and *love* that the sight of an exquisite production of nature inspires. Then the *Todea Africana* is perfectly noble. It occupies the same systematic place with us as to structure, though different in habit, that the *Osmunda* does with you. Splendid *pinnatifido pinnate* lanceolate fronds, six to ten feet high, standing in circles from shaggy bases of a firm shiny texture. Are they not lovely? *Adiantum* very common on the hills, in shady, moist places, and exquisitely beautiful. Even our humble plants, such as rushes, are noble-looking. Take for instances a *Juncus*, which Thunberg has named *J. serratus*, but which ought to be *J. palmetta*, for it is not only like a miniature *palm*, but is called palm by the common people. I must try to put it before you. First get into the midst of a black bog full of cobras and puff adders. This is its habitat—but who would think of snakes when there is a *grove* of rushes in sight? From the ground rises a black and rough trunk, as thick as the leg of a lusty son of Adam, three to six feet in height. From the summit of this springs a crown of large broad leaves, like that of a pine-apple on an immense scale, and from the centre of these rises a panicle of flowers excessively branched, and very graceful, some three or four feet high, perhaps more. Altogether it is a noble plant.

What next? Lobelias in profusion, blue and yellow, which are very puzzling and variable in character. I have a new one, about an inch high, with white flowers not much larger than a pin's head, and very like those of *Montia fontana*. I call it *Lobelia montioides*. The ground begins to be carpeted with *Lightfootia*, a beautiful little under shrub, with blue starry flowers. It is nearly related to *Campanula*. What! Shrubby campanula? Yes. Almost everything here is shrubby. Nearly all the *Compositæ*, for instance. We have tree-like groundsels.

I need not say anything of heaths and geraniums, for these you have by heart already, except that the bulbous geraniums plague me greatly. Authors appear to have mischievously multiplied them without any regard to character. Many of the dull-flowered are deliciously scented, like the night-blowing

stock, and we often bring them in for their evening perfume. The bulbs were very gay when we landed, but are now nearly all out of flower.

The articulated cactus-looking plant mentioned in my first letter is a favourite hedge with washerwomen to dry clothes on. I find it is a *Cactus* with a yellow flower, an exotic of course, the *cacti* being all American. It is now in blow along the road-sides. The Mexican Aloe or Agave is also a common hedge plant, and very striking with its magnificent panicles of flowers. A favourite tree in the gardens here is the *Nerium*, or Oleander, which grows to the height of thirty or forty feet.

I have written to H. a full account of our villa. Only think of our having a grove of pomegranates to shade the sink in the back yard! They are now quite showy with their bright scarlet blossoms. Apropos, I have eaten plantains, and think them but mawkish indifferent stuff, but they are worth cultivating, were it only to look at, for they are very picturesque.

I have taken a walk to the flats, and got sundry novelties. Among them are two new *Orchideæ*, and a pretty little bulb I had not before seen, by name *Gethyllis spiralis*. It somewhat resembles a white autumnal crocus, and flowers without leaves. I had also the pleasure of finding for myself a nondescript *Watsonia*, which Sir J. Herschel had sent me from another station a few days ago.

While walking about in a low marshy place, I was amused by watching a large secretary bird, stalking about, soberly and gracefully, within a few yards of me; but he would not allow me to approach near. I need not say in what neighbourhood I was, as you doubtless know that his food is snakes. He was at luncheon. I am now so used to these reptiles that I never think of them except when they cross my path, which is but seldom. Tortoises and lizards are very common, while snails are great rarities. I have as yet seen but two species, and of these only about half-a-dozen individuals. The garden is alive with frogs, which regale us every night with their hateful, wearisome chuckle, thoroughly discordant.

I have just received a parcel of North American plants from Professor Torrey of New York, many of them both interesting and pretty. I heard yesterday from Hooker of poor Drum-

mond's death on his passage from Cuba to Florida. Of what value is fame to a dead man? However, I pursue botany not for *fame*, but for *pleasure*.

To Mrs. L——r.

Christmas Day, 1835.

I have abundant reason to bless the day that I set sail, and to be thankful to the Almighty for having so overruled my wishes to the general good of the party. To feel myself of no use in the world to any one was often a sore thorn in my side. So now, to be useful, has all the charm of novelty. To you, who have been so all your life, taking it up gradually and imperceptibly, it must seem absurd to have any feeling about so common a matter. But just fancy a person living (I regret to say) to the age of four and twenty, dreaming about poetry and plants, suddenly and quite unexpectedly forced by distressing circumstances to act as the head of a family. You cannot wonder that I feel the responsibility. To preserve equanimity and cheerfulness ought to be my object; and how can these be better maintained than by cherishing the belief that Providence, for his own merciful purposes, has for the present cast my lot here, and by being grateful to him for ordering designs which had originated in purely selfish motives, so as to contribute to the welfare of others. I take no praise to myself, for I fully feel that none is due. I came here to gratify my own schemes. God sent me for a far different purpose. I acknowledge his goodness, and desire to be thankful for being allowed a subordinate place in his merciful Providence. You may say, "William has been reading M. Guion, has turned Quietist on our hands." No. What I write has not been learned from her, but by sitting at Joseph's bedside.

Stellenberg, January 16th, 1836.

I have but a dull picture to send you of ourselves. We have now fully determined on returning in the spring, as there seems no chance whatever of J.'s recovery here. You would wonder how poor E. keeps up as she does; but do we not see the back of even the weakest fitted to the burden? We are indeed surrounded by great mercies, and the more the hand of affliction is on us the stronger they appear. Truly,

"Darkness shows us worlds of light
We never saw by day."

The officials have all been most kind, as well as the governor, with whom I sat half an hour yesterday. He is a nice old gentleman, friendly and kind, without any state about him, and possessing all the best qualities of *excellency*, without either stiffness or pride. This brings me to the first levee I attended, but of this I shall not at present speak.

And now for Miss *Flora*. I regret to say that, being down at a place called Muyrenberg, on False Bay, I imprudently exposed myself to the joint effects of sunshine and salt water, which brought on an attack of erysipelas on both legs and arms, that has given me no small pain, and what is worse, has confined me to the house. This is very sad, for I am burning with impatience to make some excursions, and the weather is delightful. But I am not quite idle; for as I cannot go out, I amuse myself with making anatomical dissections of seaweeds, with a view to a future "Introduction, Physiological and Systematic, to the study of Algæ." Is not that fine? I think such a book is wanted. I have got a ready way of solving difficulties of structure, which is, to boil the subject. This melts the gelatine, leaving the fibres of which the plant is composed. The investigation of this anatomy is very pleasant, because I am constantly led to wonder and admire the exceeding simplicity of the structure from which Nature, or rather say, the Author of Nature, has produced such an amazing variety. There is one primary organ for all Algæ, from the red snow, scarcely visible to the naked eye, to the *Laminaria buccinalis*, thirty feet long. And what is this primary organ, of which all the plant is composed, stem, leaves, and fruit? A little transparent bladder, filled with a coloured fluid more or less granular. All Algæ are made up of such, and merely differ in the arrangement. How wonderful! My collection of dried plants amounts to 800 species, and I fear I shall gather very few more, as the season is nearly past, except as regards the mountain. I have very few bulbs, but mean to beg some for Plassey from my friend Baron Ludwig, who never says no to anything I have the impudence to ask for. In fact, he is a man of Hookerian liberality, and I need say no more than that I pluck whatever I please in his garden. He lately gave Lord Auckland, who

stopped here on his way to India, two waggon-loads of plants. There's liberality! It is a great plague to gather seeds and bulbs in a wild state, more so than can be imagined; and to my shame, be it spoken, I have gathered none, either for Mackay or for Lord Mountnorris. Promises are like, &c. In No. 46 of the Atlas published by the U. K. Society, you will find Stellenberg. Muyrenberg, which figures as a village on said map, consists of a turnpike and two farmhouses, at one of which, with the sign of "The Gentle Shepherd of Salisbury Plain," lives my friend Farmer Peck, with whom I breakfast when I botanize in his neighbourhood, and a good breakfast he gives, with silver bright, and linen white as snow.

I spent the first day of this year in a little ravine of Table Mountain, a beautiful spot, combining all the charms of a fairy landscape with a fine and extensive view of the distant mountains and plain, and of the Indian Ocean, with its blue waters, silvery white strand, and bold rocky capes. Here grows *Hemitelia Capensis*, the most noble fern that has yet blessed my sight, and the nearest to the tree ferns that we possess. A dried fragment gives no idea of a trunk ten feet high, crowned by a tuft of tripinnate fronds, measuring from four to six feet. It is a truly charming plant.

Strange that there are no land-shells to be found hereabout. I have scarcely attended to those of the sea, but I have found the blue snail shell, exactly similar to that of our own shores; and I am not yet so *vile* as not to be pleased with meeting something to remind me of your *hateful island*. Alas! I shall be reminded of it soon enough. Well, I have yet to see what is in store for me. After all, perhaps, my destiny may be New Zealand or Peru.

Next it occurs to me to say that on Monday, if my legs be well enough, I am to be at a public dinner given to the governor by the people of Cape Town, to welcome him back. Two hundred to sit down, precisely at seven. How pleasant in broiling hot weather; but what will not public spirit lead people to do! The weather begins to grow warm. December was cool, and we had sometimes a fire in our parlour.

To ——.

March 11th.

It was kind of you to write so fully of poor H., and I need not say how sincere is our sympathy, but you do right to dwell on the attendant mercies and blessings granted you. It is in the firm belief that these, as well as the affliction which they surround and assuage, have been dealt by a Father's hand, that true consolation can be felt by those who survive. Nor is the doctrine of a special Providence, though many disbelieve it, wanting an answer, on such occasions, in the hearts of the afflicted. At least I can say from experience that it has never been more strongly and unanswerably impressed on my own mind than in times of sorrow and perplexity, and though I admit that when the mind recovered its buoyancy I have allowed it to return to the every-day thoughts of the world, yet I trust that these impressions have not been altogether like those on sand, gone for ever. That beautiful expression of Job, "The Lord gave and the Lord hath taken away," has often come to me with great force; indeed, I think has seldom or never been absent, and it has at times brought tears of gratitude to my relief. You surely have had reason to bless the Giver of such a brother, and also to bless him for the manner in which that gift was recalled.

You have in W. everything that could be desired in a brother. Not only devoted affection, but steadiness and prudence beyond his age, with ability to learn any business to which his mind is directed, and zeal to carry his knowledge into practice. It is not often that a person is found who is capable of acquiring any sort of knowledge of this kind, and able to turn with facility from one trade to another. I have no doubt of W.'s success in whatever he undertakes, for I know he will spare no pains to acquire a thorough knowledge of the subject, and then will fully bend his mind to carry it out effectively. It is here that I feel my own lamentable deficiency and inferiority. In fact, when I bring myself into comparison, I cannot repress feelings of shame and self-contempt, for however good my intentions are, hitherto I have failed to bring them into practice, partly for want of mental courage, and partly from (I suppose) apathy.

But I am resolved, and surely will drive my resolution into practice, that if ever I get back from this Cape expedition, I will take to some honest calling, and try to rise beyond my present position.

I have had the pleasure of seeing a superb specimen of *Disa grandiflora* in blow, a truly noble flower, which grows only on the top of Table Mountain, where I have no hope of being. I shall bring home seeds of several Proteas, very handsome both in foliage and blossoms. *P. argentea*, our common firewood, is on the whole, from the seed to the full-grown tree, one of the loveliest objects I have seen in Africa. *P. mellifera* is also exquisitely beautiful. Fancy a bush like an arbutus, covered when in flower with large scalloped cups, variegated with the purest rose colour and white. They are easily grown, and merely want protection in the winter.

With regard to returning here, my thoughts and wishes have changed. I shall certainly try to secure the situation, though I should return more from duty than for pleasure. I should never murmur *aloud* at my lot, though I confess I do not find it pleasant to be separated from those belonging to me.

On the 10th of April, 1836, the sorrowful party sailed on their homeward voyage. William thus records his mingled feelings. "I begin another diary, but cannot promise to make it so good as the last, for when I wrote that, I was full of high hopes and visions of future adventure, and trusted those pages might be but a preface to future discoveries of forest scenes and habitats. But alas! fate willed otherwise, and so here I am, after six months' quietness, trotting back the same old road, as fast as the gentle S.E. trade-wind will permit. It has always been part of my creed not to grumble at necessity.

"I took an outline of the last view of Table Mountain, but it was long after we had passed Robben Island, and were standing into the open sea. I did not weep; perhaps I sighed. If so, let the sigh be smothered. Then said I:—

"Away, away!—my native land
Lies o'er the waters blue;
Good-bye to Afric's heaps of sand,
Good-bye to Table Mountain, and,
Sweet Stellenberg, to you!

Good-bye to crickets and to frogs,
Good-bye to lean and ugly dogs;
And welcome, welcome, Irish bogs,
Hearths and hearts warm and true!"

Further rhyme was lacking, so I sat down and enjoyed the bounding of the vessel over the blue waters. We had a fair day, fine breeze, and bright sun, and I sat on the poop. Before evening had closed in Africa had become a shadow, and the dreams of my boyhood had passed away, hid beneath a horizon of cold, dark water.

"Have I then crossed the ocean and done nothing? It is too true, but come—no matter; the grey hairs are still so few that I can count them without much trouble. Let me therefore live in the hope that brighter days may come."

CHAPTER IV.

SECOND RESIDENCE AT CAPE TOWN.

The death of Mr. J. Harvey took place on the twenty-sixth of April, and in June the melancholy group reached England. The Cape appointment being readily obtained, William, after spending a few weeks in the home circle of his relatives, returned to a lonely residence in Africa, led back, as he has himself said, by duty rather than pleasure, the charm of novelty, and the high hopes which had gilded his first voyage having passed away.

He writes on board—

Ship Wellington, August 19th, 1836.

"Once more upon the waters"—even so. We have been now a week at sea, and the time has glided by without much trouble. We have literally had nought but gentle breezes, *pushing*, for they are too gentle to call them *blowing*, us along. Biscay has been like a millpond. We hope to see Madeira on Tuesday next. What a state of suspense I am in about Tristan Da Cunha. Only think, Captain Liddel has been there four times, and is quite fond of going there when it falls in his way, so we have a fair chance of seeing it. The last time Captain Liddel was there, in 1835, he allowed all the passengers to take a run on shore.[1]

Apropos of Tristan Da Cunha, Captain L. draws very nicely. He showed me to-day his last year's log-book, in almost every

[1] Mr. Harvey had the gratification of seeing this island, especially attractive to him from its tree ferns.

page of which was some little sketch, with something written underneath in very good taste. For instance, there was a sketch of the Land's End, then of Madeira, Teneriffe, &c., likewise a beautiful little drawing of Tristan itself, as well as sketches of almost every ship he had spoken, waterspouts, albatross hunts, &c., in fact, of everything remarkable that occurred. It must be delightful to himself to look back on all these log-books, and to recall the scenes in their original vividness. How much better than many an album. He has now eleven such volumes, and is working at the twelfth. He is a very amiable and good man. I particularly like the terms he is on with his officers, and the way he treats his midshipmen, of which there are five or six on board. You know in general they are treated scarcely different from common sailors; but not so in the Wellington. They are regularly invited in turn to dine in the cuddy, and the Captain always makes it a point to take wine with them, and to help them to such delicacies as they do not meet every day. These little attentions show what the man is made of.

The two cases from Loddiges' in superb vigour—fresh green leaves and new shoots most luxuriant. So much for Ward's method.

Ah, that I were less idle—that "my mind to me a kingdom were." How little worth are one's thoughts without settled occupation! One cannot muse at all times; but I do look forward very seriously to the future, and (as yet) think I have made a right decision. I do not return with my former buoyancy, it is true; I feel sobered, and in sobriety have made the election. How it will end depends on higher counsels than mine, and thus I am disposed to leave it. I intend to do my best. There are things beyond our control.

To Mrs. L.

Ship Wellington, August 20th.

My feelings on this my second voyage are very different indeed from the joyous excitement that accompanied my first, yet I am not cast down. The inducements to persevere in the line of life I have chosen, are, I trust, sufficient to make me go to work with full heart, not to flinch from minor distresses; but whether this spirit of endurance be as strong when 8000, as

when 800, miles from home, remains to be seen. Knowing my own weakness, I dare not speak more confidently, for I have seen too much in the past year to venture on saying what I may or may not do. I cannot look forward to a residence at the Cape for a long term of years with pleasure, but am resigned to a limited number; and then, should Providence spare my life, I hope to return before all my feelings are dead or cold. In ten years I shall be thirty-five. I have always had a habit of looking at people of all ages older than myself, and imagining myself in their place; and even when I see a young person I have tried to recall my feelings at his age. I suppose others have similar habits. 'Tis easy to talk of ten years in anticipation—but look at the last five. Are there not incidents enough to desolate any circle of happiness which one may picture to oneself? But I shall not take trouble at interest by looking beyond my present horizon. Were I a mental Teneriffe I might indulge; but let me remember how difficult it is to climb, and how comfortless when reached.

Treasury, Cape Town. October 27, 1836.

As I was coming up to my office this morning, I spied lolling under a wall, beside his basket of fruits, an ugly old Hottentot fanning himself with a plume of ostrich feathers—a fit subject, truly, to commence my letter with. I must begin with something, and I may as well take a text that points to my African residence, though to me things here have nearly lost their novelty. Hitherto I have been passingly humdrum. I have amused myself looking over some of my plants, which I had not seen for two years, and they bear the faces of old friends. Some of them feel strange to me, some of them I had forgotten, and others are seen once more with the feelings I last parted from them. So it will probably be with old friends in the flesh when I return amongst them. I shall have to renew my acquaintance with some, while others will be familiar at the first glance after the termination of my absence.

I just remember that this is the end of October, and you are probably enjoying fires, while I am coveting coolness by the aid of open windows and a white jacket. We have lovely weather, and doubtless the flats are covered with beautiful flowers, but they blossom not for me. I see nothing but dusty streets and

white houses glaring under a burning sun, save when I take a morning walk to Ludwigsburg, to breathe a little botanical atmosphere. If I am to resume my acquaintance with the Flora, I fear it must be through a kind collector—I shall not myself be able to spare sufficient time for field labours. If I can work sufficiently in the cabinet, it must satisfy me. Did I then do wisely in giving away all my former collectings?

On Saturday I stole a holiday, which was pleasantly spent in a walk round the kloof which divides the Table from the Lion Mountain, but not all performed on foot, for Sir J. W.'s waggon met us at the opposite side of the mountain, and brought us home. My companion was Mr. W., who is going as chief-justice to St. Helena, and whose object was to pick insects, in which I assisted him. We did not get many, but we killed a snake (awful!), which I brought home in my pocket. See what dangers surround me! At the opposite side of the kloof is Campo Bay, and a rocky shore extending to Green Point. Here we rambled pleasantly, picking shells. On our return we had a specimen of a south-easter, which terrified Mrs. W., and for a moment there was a danger of the waggon being blown over. How pleasant to have to deal with such customers. To-morrow will be the first meeting of the legislative council since my arrival, and I am to be sworn in.

My letter-writing pleasure has not yet visited me, and I write more as a *duty* than anything else. Now Wordsworth calls duty "stern daughter of the voice of God." I have not yet opened my botanical books, going on my third week on shore. Oh, recreant knight! Hooker is the only botanist to whom I have written, and that letter I consider "a duty." The ghost of Ward cries loudly upon me, but he must be deferred for the next ship. I have just been reading Sir J. Mackintosh's life—parts very interesting—parts dry enough. I have small taste for metaphysics, and can therefore scarcely appreciate such a character.

Protea, December 18, 1836.

This is a boarding-house, where we have a large party of ladies and gentlemen, among which I am a cipher; but what are they to me? The place is pretty enough, and was the

governor's country-house in the halcyon days when governors could afford to keep such. You would enjoy the shady walks on one side and the open lawn view on the other, or the craggy mountain which shuts us out from Cape Town, up whose sides are pleasant rambles haunted by wild flowers, and commanding extensive prospects. I write at my bedroom window, which looks out on a garden, and in full view are some very large old orange trees, on which hang the last of the season. That pleasant fruit is nearly gone, being decidedly a *winter* one. This gives a southern aspect to the view, otherwise there is nothing to remind me of my distance from home except it be the loneliness and absence of all that I care about. I miss the sympathies of home much more than I ever thought I should. It used to be my idea in the pride of my heart that I was very independent of others for happiness;—so thoroughly selfish, that I could support comfort in utter loneliness and seclusion from society—but 'tis far otherwise when put to the test. Yet my loneliness here is of a very mitigated nature to what it would be in my old favourite ideas of Swan River and Illawarra. M——, as far as he is able, bears with me, and we talk over and over again of everything we mutually know in Ireland; but then I don't know the people he does, and *vice versâ*, so we make but a bungled piece of it, yet we often get over a dull evening in our dull repetition. I hope they are all so well in Limerick as to let you home at Christmas, for I like to see every one at home at that season. 'Tis right and proper they should be. But there is no plum pudding for me. I mean to spend my holidays at Simon's Town, on False Bay. I should like to go on as far as Cape Point. It would be pleasant to stand on the most southern point of Africa, and look towards the South Pole. I have heard 'tis a cliff every way worthy of its position, but if it beats Moher 'twill be doing a great deal. Oh, my dear! when shall I see Moher again.

To N. B. Ward, Esq.

Cape Town, December 20.

I wish you and Mr. Ross would lay your heads together to assist a clumsy fellow like me. I want an instrument for holding, and another for cutting, minute seeds with hard glossy

shells, on the table of the microscope. Query. How are minute lenses held whilst polishing, and with what are they polished? I fear with diamond powder, which, unless it could be fixed on something like a minute file, would hardly do for abrading the hard coats prior to dissection. How do other botanists manage? Pray ask Brown, Lindley, or some of the great guns. Also ask Ross if he could make a compound dissecting microscope, which would not *reverse the image*, and which would allow an inch, or one and a half inch focus, with a considerable power. I don't know if the non-reversing system is possible; perhaps by having large lenses it might be done. I want a power as great at least as the second power of Jones's simple microscope, which he called "Hooker's Improved," &c. For this I would willingly give ten or twelve pounds, if it could be managed for this sum. There should be a large dissecting plate. I cannot manage to dissect under a reversing microscope.

Cape Town, January 25, 1837.

I don't know if there is any vessel for England: there is a ball up, and that may prove one. I grew heartily tired of my lodging at "Protea," and have moved back to town. Here at Mrs. V.'s I am completely at my ease, and as happy as I can be in Africa. I hope in six or eight months more to have a little place of my own. Country air is pleasanter food than medicine. My bedroom here serves for *study*, *herbarium*, and *shell* room, and you know a naturalist in preparing his goods breeds odours little to be desired in a sleeping apartment.

A herbarium or *dirt pie* gives no idea of the richness of our flora. One has but a few pieces of a beautiful plant, which in a state of nature actually affects the landscape as far as the eye can distinguish small objects. In many places for instance, the country looks quite blue with *Lapeyrousia*, or pink with *Watsonia*, or glowing in all the variety of *Ixias*. Our fields bespangled thus with showy plants are covered also with innumerable blossoming tribes, to be seen only when looked for, hiding their little heads under their pompous neighbours. If any seeds of *Aristea pusilla* have come up, nurse them carefully, for though a common thing, even to the present day it gladdens my heart as I drive along the road. Its profuse

sky-blue flowers, "The purest that ever were fed upon dew," open early in the morning, and are gone before night, and next morning brings a new offering of beauty. No matter how dark or gloomy the morn may be, or even if it pour rain, this grateful little plant opens her treasury and presents her offering, unlike other selfish things that never put on a civil face save when the sun shines out. I must look for seeds of *A. melalenca*, and send them. It is on a different scale, much larger than *pusilla*, with broad white flowers, and dark brown or black centres—an exquisite plant. *Hypoxis stellata* is the perfection of loveliness. I hope to send some bulbs by M. Mind, it requires more water than most other Cape bulbs.

To N. B. Ward, Esq.

Cape Town, March 9, 1837.

Your welcome letter by Mr. R. has just reached me, and I am much obliged for the Canada balsam, &c., and I have set to work accordingly in preparing objects for my microscope. Your letter was like a spur, and since I got it I have been all activity early and late. At first I was miserably awkward, and daubed myself unmercifully. Doubtless I should have given up the job as hopeless, if I had not had your beautiful specimens before me, proving that the difficulty was not insurmountable. At last I got more handy, and can now put them up without smearing or dirt. It is a most admirable method, and has but one fault, which is that of rendering some objects so transparent that they become invisible. Many of the more delicate Algæ are obliterated altogether. However, I gratefully accept it as a means for putting up peristomes.[1] I am going to mount all the genera of mosses, and some of the remarkable species. I confess, however, I do not see that your method is superior to Mr. Bowerbank's, except perhaps in being less troublesome, nor do I see any advantage in using such large specimens as transparent objects, branches of moss for instance. The true form of a moss leaf is only shown when the object is wet, and a wet object requires glass behind it, and how you are to manage with yours I cannot see. I think you will find the balsam the best for

[1] The teeth or membranes that surround the mouth of the capsule of mosses.

mosses, as it has fully the effect of water, and you can place each specimen in all its botanical characters, so that they can always be referred to.

I sent you a parcel about a week ago, which contains little of moment except the stumps of *Hemitelia*, with the *supposed* parasite, making it plain to all the world that this is none other than a part of the plant itself. I gave Bowie some young plants of *Hemitelia* to send home to Loddiges', and on these, if they grow, this curious frond will form. I have seen a forest of them, and every trunk well covered with these delicate branchlets.

I rejoice in the account you give of the spread of your system over the Southern Ocean, but I cannot promise you any report from the Cape this year. The only things I have growing are *Hymenophyllum Tunbridgense* from Table Mountain, where it abounds, and *Hygrophila* from Madeira. The former flourishes: the latter, being an inhabitant of a mountain some 4000 feet high, feels the heat of Cape Town, and is consequently lank and lean.

March 28th. Yesterday's south-easter affords talk to the town, and its remaining effects give annoyance to cleanly people, like me, who do not like to have their white jackets soiled by the dust. This is the wind that makes the Cape disgusting. I could not take my evening drive, and had to content myself with a walk up and down the government gardens, and came home the soonest that conscience would let me. I hate exercise I think more than ever, yet it is absolutely necessary. The only kind I enjoy is a drive to Sea Point, when I get out and wander on the shore for an hour, and drive home again. Yesterday at breakfast was brought in a superb bunch of flowers, among which were half a dozen specimens of *Disa grandiflora*, which would make your eyes glisten with wonder and delight. Oh! for a walk through Loddiges' houses. The *Microloma* is a charming little climber, give him sticks to curl about.

February 18th. On my table stands a "sweet Tuberose," by no means "the sweetest flower for scent that blows." Indeed, were it not out of respect to its worshippers, Shelley, &c., I might be tempted to put it outside the window. Beauty it has of a very high and classical order. It reminds me of flowers sculptured in white marble or alabaster, purer and more graceful than a white hyacinth, but in scent not to be compared to it, nor even

to the narcissus. It is heavy and overpowering, nothing emitted to make one long to be a bee, which I take to be the perfection of odours.

To J. Fennell, Esq. March, 1837.

I have indeed taken so many excursions lately that I almost fear I shall earn the soubriquet of her Majesty's *pleasurer*-general, instead of the more dignified one of *treasurer*. Indeed I am singularly undignified. 'Tis a melancholy fact, and so I thought yesterday as I crossed the "Parade," up to my knees in mud, with a large tin box in my hand, on my return from a long mountain walk. But who cares? Did I not gather an abundance of *Hookeria læte-virens* (which plant is much more common here than at Killarney), and did I not also find the beautiful *Hookeria laricina?* Surely these were worth forfeiting some dignity for. I have lately found many new and beautiful mosses, and am busily hunting for more. I have already discovered *two* new *genera* of that tribe, and among the species a new *Andræa,* which is the first and only one of that species found in the southern hemisphere.

I have had so much of foolish flattery, that I am quite sick of it, feeling that it is quite undeserved—and we all know what praise undeserved is equal to. I met with a story some time ago, either in "Blackwood's" or "Chambers' Mag.," which suits my case admirably, exaggerated of course, but true in the spirit. It is of a young man who was driven out of his senses by every one about him continually harping on his being a genius. Every anonymous publication was attributed to him. He could not enter a room but every eye sought for the angelic fire in his. When he opened his mouth, every one nabbed at his commonest commonplaces, till at last they fairly drove him mad with vexation; for all this time he had a true and most painful idea of his own insignificance, and he was constantly telling them so, but nobody would believe him. Now, though people have more sense than to go on in this way with me, they have only a *grain* more, for I am constantly plagued with the name of genius, and talk about my abilities, &c., while I know myself much better than they do, and that it is the profoundest humbug imaginable. This began at school, and at Ballitore it was blown to such a height that I got thoroughly disgusted.

The same farce has been acted ever since by almost all my acquaintance, to my very great annoyance and humiliation; for there is nothing more humiliating than to be presented in a character that you cannot support. Latterly I satisfy myself with just *stopping* my ears, and letting the foolish creatures gabble as they please, saying to myself, "Pooh! Who cares?"

Cape politics are stale, dry, and unprofitable. The Caffres are our only disturbers of repose, and without disturbers how can we have politics? It is true, as you have read, that our government recommended the seat of government to be transferred four or five hundred miles up the country; but the people at home declined compliance, to the universal satisfaction of every one, save the botanical member of council, who feasted in anticipation of the wondrous treasures of Uitenhage. I believe the only thing Lord Glenelg has done to please the people here, is this refusal to remove the seat of government. It would be the ruin of Cape Town and of the bulk of the public servants who have property here. But we should then get excellent fresh butter and eggs, things not so plenty at this end of the world, and what would not one sacrifice for them! By the way, the next time you want cows, come here for them. We can give you a drove for the price you give for one. They sometimes fetch fifteen shillings a head instead of pounds. Yet milk and butter are egregiously dear. The latter never under eighteen pence per pound, and often (as now) three shillings, scarcely even to be had at that price, and of very bad quality. There must be sad mismanagement on the part of farmers. The Dutch farmers generally, are doggedly attached to their old customs—thorough *Tories* in improvements, and slovenly to boot. Witness Cape wool, which by the last London prices brought three pence or four pence per pound, while its sister, Australia, was up nearly as many shillings. Alas! that so it should be. Then the cochineal insect, which is so valuable, abounds in profusion around Cape Town. Millions are yearly born and die, and no one gathers them. Why do I not lift up my voice, as honest old Mause,[1] and testify? Alas for me, I never had the gift of the gab, nor what is more, the courage to stand forward and dare public talk. My benevolence is purely passive, but let us hope for better things, and that while thy

[1] See "Old Mortality," by Sir W. Scott.

public spirit induces thee to clear the streets of drunkards, mine may rise from its clods of indolence, and be useful in some other way.

Treasury, Cape Town, April 6th, 1837.

I have been fussing about most of the morning, and therefore desire to refresh myself with some nonsense, before I turn the keys in my big iron chest for the day. I have rambled once or twice since I wrote last, and having bought a horse, may ramble yet again, and as often as leisure affords. As the season wears on things will come into blossom. Mosses are the reigning favourites for the while. They begin to tire. Probably algæ will supply their place, as I have just received a letter from Greville, and a letter always acts on me in inducing to the favourite pursuit of its writer. Poor man! He has been suffering from his eyes—a threatening of blindness—the greatest mishap a botanist could receive, for who has more work for his eyes than he? He was better, but still unable to use the microscope. I have been, and am still reading "Coleridge's Remains." They are, as might be expected, interesting; but in his lectures made up from the recollections of his friends, you have not the comfort of thinking you receive his own words. I am a lover of his prose almost as much as of his poetry, but cannot help continually grieving at the innumerable half-finished columns and arches you meet scattered about, like the national monument on the Calton Hill—a noble plan, but left half-finished. He certainly had a wonderful mind, but how little is posterity the better for it. The weather cools, but the days shorten, and I have prepared but little winter's work as yet. The races and race ball commence next week, neither of which will I patronise, but I suppose I must go to the Government House parties on the 13th and 14th; however, I do not mind that much. I stole a holiday on Saturday for *Paradise*, where I spent the day poking after mosses. I got three species of *Hookeria*, all lovely, and one of them appears to be quite new. Its nearest ally is a species from New Holland, but 'tis quite distinct. I passed through a superb forest of *Hemitelia* (tree fern), which I gaze at every time with new delight. It never can look common; its loveliness is too surpassing to associate the idea of vulgarity with it; though in some places the stems were so dense I could hardly

win my way through them. Moreover, I got into a sad jungle of bramble and underwood, the only way of getting out of which was by crawling on my hands and knees along the stony bed of a mountain rivulet, and in some places only a height of two feet *penetrable*. In all places I had to pioneer and break my way, for about a hundred yards, but that was sufficient to fill me with thorns and scratches. It was at Paradise that old Menzies got many of his beautiful mosses, and I had therefore the greater pleasure in picking the *Hookeria laricina*, which he had discovered in this very spot. It is a lovely moss, and a luxurious lady might covet it to stuff her grates with.

April 27, 1837.

Where is the February news, and why are you all silent when I confess I am anxious to hear? for we have frightful accounts of the influenza, which appears to be as severe as the cholera, and I dread it as much for you all. Have you written? Thanks to M——'s people, I got a bundle of Limerick papers up to the 27th, which were some comfort. Perhaps they know he is on his way home, and will send no more. Let the Chronicle be forwarded regularly to the post every week, ship or no ship.

You would like to hear what I am doing: truly little. As winter approaches I mean to take to gluing, having a great many piles of "dirt pies" to be transferred to the Herbarium, and this with reading will pretty fully employ my leisure. I have lately been algologising pretty briskly, and found a few things not seen last year, but our seaweeds are not so pretty as those of Devon. I have not heard from Mrs. Griffiths since I sent her the "Irish Flora;" I intend writing by this ship. Poor old lady, I fear I shall not have many more letters from her. Think of my employment lying in bed of a morning. Opposite my bed is a window with forty panes of glass therein, which represents my age when I leave the Cape. I fancy every pane a *year*, and weave stories respecting them, or look back to the panes that are already passed over. An idle work, but now that it is too cold and dark to get up before eight, it is an occupation not devoid of amusement. I am still as far as ever from housekeeping. I have got a gloriously bad name in the visiting world, and I believe it is now pretty well

understood that I dislike visiting, and people are so kind as to cease to press me.

May 3rd. I am reading "Evelyn's Diary," and mean to call my next new plant *Evelyna sylvatica*, provided it be "a wondrous lovely simple of rare stupendous fabriq." 'Tis amusing to have a peep at his times, but there is less of this than I expected; I am, however, only in Vol. II., and there are five. My "Southey's Cowper," long since ordered, is not yet arrived.

June 22nd. I hardly know what to think when I look back to Ireland; everything seems so sad among you, as I see by the newspapers—failures, distress, sickness, and stormy politics. A few years will tell much, but it often makes me very dull to think what they may bring about.

I have been edified by the reading over the old letters from school, which I have not thrown into the fire, as I intend to amuse myself with them at some future time; but it is humiliating that my mind does not seem to have advanced a single jot since I wrote them, though ten years have passed over my head, with their changes and sorrows, and have transformed the idle conchological schoolboy into the listless botanical treasurer of South Africa. The button on my coat has altered, and the cut thereof, but there is no other change; I am still as ardent a pursuer of folly as I then was, nor do I appear older, though my hair has sundry grey tell-tales scattered through it. When is the mind matured, I wonder? Some men appear to have progressive minds; and to go on rising in the scale, and others stick short at a very dwarfish growth, and years bring them no wisdom. Of the latter class am I: I don't think I have added anything since I was sixteen. Just as I had written so far, I had to adjourn to the Legislative Council, to listen to the singularly entertaining debate on the second reading of the "Orphan Chamber Ordinance Bill," and to give my vote, though not to speak thereon; and now I resume in my bedroom, by a snug little fire, whose only fault is that the chimney is so ill-natured as not to exert itself without the aiding draught of an open window or door, which is rather provoking. I live in the hope of improvement from a mason the first fine day.

My occupations are little varied. The last few days the rain has poured in torrents, so of course I have sat by my fire reading either Crabbe or Shakespeare, or some library book. The two

former are certainly admirable companions for a wet day. I have only lately purchased Shakespeare, having existed up to this day of my life without him, at which I marvel. I have now got an edition, forming a small duodecimo volume, bound so pleasantly that it will lie open on the table, and of a size that I can carry about with me, and read in any attitude that the heat of the weather may force me to adopt; and I hold, that with a pocket Bible and a pocket Shakespeare, a man is at all times well provided with companions for every mood of mind. Crabbe is certainly an admirable substitute; but I have read him now so often that it requires some interval to let him fall back again into the shade, or some one with whom to read and enjoy him. What a change in my taste for poetry. Moore is stuck on my top shelf, and never opened, while Crabbe is seldom off my table, and often on my bed. On fine days I drive out generally to Green Point, to look for plants, bulbs, or seaweeds, as the fancy goes. I begin to wish for a garden, to cultivate the almost endless bulbs. It is possible that towards the beginning of summer I may fix myself where I can have a little patch of ground. I met with a charming plant a few days ago, *Septas Capensis*, which perhaps you know. It is nearly allied to *Crassula*, and truly lovely; an umbel of white and carmine flowers (inside white, outside carmine) somewhat the shape of stonecrop, but much larger. You know all the parts of the flower *ought* to be seven (whence the name); but there are few things in the world just as they ought to be, and so this flower varies in six, eight, or nine segments.

July 2nd. Since my last date sundry things have happened, among which may be mentioned that my chimney is cured of smoking, which adds singularly to my comfort, and I have had a letter of *twelve* closely-written pages from dear old Mrs. Griffiths, at Torquay—is not that delightful! Really it was quite a cordial to my "faithful" heart to receive it, accompanied as it was by a charming collection of algæ, and the fourth volume of Mrs. Wyatt's book. In rarity of species this volume quite equals the former ones. *Sphacelaria filicina*, to my eyes, is exquisite: it is very rare. I am now busy gluing my plants, but I have not the absorbing interest in the employment I used, and sooner grow tired.

What sort of weather have you? Here it is cold, raw,

and damp; hail showers, fogs, and rain in torrents. Table Mountain perceptibly *white* for two days. The other mountains are, and have been latterly, as "white as a sheet." These are matters here to talk about—yea, grave subjects of discourse. Well, let us enjoy the cool weather while it lasts, for "anon, anon," we shall be grilling, I guess.

July 17th. I dined on the 15th at Government House; but there being two dozen at dinner, I was delightfully insignificant. In the previous half hour I talked small with the ladies, but after-dinner found myself much better sorted with a botanical artillery captain, who had been to Fernando Po, and who had much that was pleasant to say on South African botany. We have planned to spend my first idle day in an excursion to seek for the charming *Hyobanché sanguinea*, a plant I long to see, and which he most rapturously describes. He met a field of them the other day. No one has yet succeeded in raising it, as, like all its tribe, it is a parasite. Since I wrote last I made my maiden speech in council. That is, I stood up in a flutter, my heart beating so loud I could almost hear it through a double-breasted waistcoat, and so quick, it almost stopped my breath. But I took courage, and got out "Sir," and so forth. Fortunately the sitting was with closed doors, so the public are not the wiser. I am just reading Sir Walter Scott's life, and am sadly disappointed in the scantiness of the autobiographical fragment, but since I have got into Lockhart's part I am better pleased. The most delightful part of such lives to me is the incidents and characters that suggested the fictitious ones, and the letters of himself and his correspondents. I have not yet got hold of the "Pickwick Papers."

August 4th. Just a twelvemonth since I left home, and does it seem long? In part yea, in part no. There are so few things to recollect the time by, that life glides away imperceptibly. The week begins and ends. Then comes Sunday, and, after a few times, again comes pay-day at the month's end. A regular routine life like mine gets on quicker than one would imagine. I never regretted the passage of time less. As Moore says, "It seems but pastime to grow old." I say five years hence I may get home. Six seems a better chance. Ten. Surely I shall return! What of Lady Flora! Not much, save that the *Irideæ* are beginning to multiply as we approach

the spring, when, like a flock of butterflies, they cover the earth with every colour of the rainbow, and are as quickly gone again. The *Hesperanthæ*, not seen by me last year, sober, quaker-like elegancies of the *Ixia* tribe, are now coming out in plenty. They have *moonlight*-coloured cups of the sweetest odours, the reverse side of the flower dark brown. The odour too much for me; not so delicate as our own dear *Hesperis*, or as the evening *Pelargonia*, that the Cape twilight so plentifully rejoices in. But the Dutch *frows* delight, above all things, in the *Hesperanthæ* or Avondbloomjes, as they call them; and you meet with black, brown, and yellow children, or, if there be any other hue, parading the streets with huge bunches of these flowers. You may buy two for a penny.

August 12*th*. I have bought a cottage within about a mile of my office, with a sweet little garden, covering about an acre of ground, and "All sweet flowers of every clime" "grow in that garden in perfect prime." Is the vacillation quiet at last? Yes. The natural effect of gravity in the giddiest pendulum will bring him to the starting-post at last; and I have purchased the first place I looked at last year, a day or two after my arrival. From the terrace there is a beautiful view,—of blue waters, Alpine mountains, and precipitous rocks, covered with dark pines and white silver trees, the distant city, with sandy plains beyond; and the eye peeping out on all this from jessamine and woodbine bowers.

September 2*nd*. I have secured a quiet companion in the shape of my friend Mr. E., who joins me in housekeeping.

Cape Town, August 14th, 1837.

My dear Ward,

This morning brought me your welcome letter written in May, and as I have a spare hour I may as well answer it, although there is no mail standing ready with open jaws at present. I find, on consulting my note-book, that I have not written to you since April 19th; but you must not think on that account that I have not thought of you, or have neglected our fair science. Nay, nay. I have been right assiduous for the intervening months, though I have little to show for it, as 'tis rarely I can make a long excursion; and in a walk of an hour (my daily habit) there is not very much to be picked up

in the neighbourhood to which I am restricted. Still many a little makes a muckle, and time may show.

You will be glad to hear that I have purchased a house and *garden* (the latter about an acre in extent) in the neighbourhood of the town, close to Ludwigsburg, commanding a lovely prospect of the bay and distant mountains, and altogether a little spot to put a man in good humour with himself and all the world beside. My terrace is shaded with vines and *melia* trees, the latter just now budding, and in a month will be covered with their graceful purple and sweet-scented flowers. The garden of course contains few plants now, but twelve months hence we shall have a different story to tell. You may then pull my ears if it be not rich in all the Africandees within my reach. When I get settled I hope to have stories to tell of a little fern and orchis house, for which there is a snug corner, communicating with my bedroom, so that I can water my friends when dressing in the morning. I wish I could show it to you. You would, I am sure, admire the whole spot; and as for the distant view, 'tis rarely I have seen it equalled. I know not Naples, but we have our intense blue bay, never void of ships of all sizes and many shapes, with lesser craft flying among them. We have a distant city at our feet, and the mellowed sounds coming from it. Table Mountain at one side, standing like a wall; beyond it the various coloured plains called "Flats" (alas the name!), and our horizon landward is a range of high *Alpine*-looking mountains, of very beautiful and bold shape, and just now tipped with snow. On the whole, 'tis a scene to satisfy the eye, and by the constant changes of shadow, to keep it unsatiated. I have been drying everything I can pick up, the *results* for you one of these days; but my bundles come far short of those of last year. Still I have made acquaintance with many plants not in those bundles, some of which will interest you. I think there were very few *Oxalideæ*, for instance, but this year I have picked up a good many. As I have now got a garden, I shall store up all the oddities I meet with, to be occasionally despatched to Loddiges'.

I am much obliged for Dr. Fischer's kind message, and shall rejoice to receive the treasures of the Caspian and Kamtschatkan seas, and to exchange for them the productions of the south.

Both those northern reservoirs I have long wished to explore, either personally or by deputy; and the news of anything from them is therefore the more welcome. I shall be glad also to cultivate Dr. Jacob's good opinion, whose name is, I think, already in my herbarium to an *Alga* from Cornwall, given me by Arnott. Remember me most kindly to our venerable friend, Mr. Menzies, and tell him I have mosses to send him soon; moreover *Algæ*, such as they are; and pray, whenever you write, remember to mention the dear old man, for I am always delighted to hear of him.

Summerville, September 17, 1837.

Last night we slept in our new quarters for the first time. I write amid boxes unpacked, and in a house half set to rights, but in the most perfect quiet; the only noise being that of the cook scraping horseradish, and the birds chirping in the fresh green of the oak-trees, which are just spreading out their young leaves in this, the loveliest month of the African spring. The date of this reminds me of our *first* landing this day two years. What a train of circumstances comes up with the thought!

Botany has perforce slept for the last fortnight, housekeeping being the ruling passion. To day brought me a letter from Ward, telling of a package of plants for me by a vessel in the Bay, but I have not yet seen—nay, nor inquired for them. I have not heard from Hooker these five months, though he must have received two letters from me with accounts of my rambles and discoveries. What do you think of *Bowerbankia*, a new genus of Zoophytes called after Mr. Bowerbank, a microscopist whom I met in London? But what is vastly more interesting and important, I got a present to-day of two fine black hens, from which I hope for unlimited eggs. Oh, what a falling off is there!

Yesterday Queen Victoria was prayed for, for the first time in church, and we had a funeral sermon for the old king; the text curious, being part of one wrested from its meaning for the occasion, viz., "There is another king, one Jesus;" but Mr. H. gave us a very eloquent and in many respects excellent sermon. Poor little Victoria! to me there is an enthusiastic interest in everything connected with her. I confess, for the first time in

my life, my heart went fully along with the beautiful prayers for the sovereign. In general they are a mere form; for you cannot pray for an old man who has led, and, for all you know, is leading a dissipated life, with the sincerity that you feel in petitioning for so interesting a young creature as our present sovereign; so let us end with the hearty aspiration, "God save the Queen."

Treasury, October 2.

Alere Flammam! 'tis a useful thing, and so Hooker thinks, for he has just sent me two Nos. of his "Icones Plantarum;" at Tab. 118 of which I find the *Harveya*. 'Tis a very lovely plant, with which I am highly pleased and flattered. 'Tis *apropos* to give me a genus of Parasites, as I am one of those weak characters that draw their pleasures from others, and their support and sustenance too, seeing I quickly pine, if I have not some one to torment. You will be glad to hear that my slumbers are breaking.

I am about preparing a small octavo book, called "Genera of South African Plants." It contains descriptions of all Cape Genera, in as simple language as possible, with remarks on their habit, places of growth, and probable number of species, &c., arranged after the natural method, but like Mackay's "Flora," having a table of the Linnean prefixed, as well as a brief introduction to botany explaining the more common terms. This is intended to be sent to resident doctors, clergymen, &c., scattered about the country, to excite their idle minds to send specimens into Cape Town, and to cultivate a taste for botany generally in the colony.

Oct. 8th. 'Tis blowing a south-easter, and has been so for the last three days; yet my study is so admirably situated that I sit with the window wide open, and feel not any breeze or dust, and hear scarcely more than the murmur of the wind in the distant trees. How different at Mrs. Von's, with rattling windows, eddies of dust, vile smells, and everything hateful. Let me describe my study. It looks out on a garden just now full of weeds. There is a trellis-work outside that obstructs the strong sunlight, the *shadow* coming from vines which are in summer luxuriance. At a little distance is a green railing, my boundary, and through and above the bars at a considerable

distance below, is the blue bay, now covered with "white horses." The steeple of St. George's church is the most prominent feature in the foreground, but too modern and romancemented to suit my fancy. So much for outwards. Inwards, now:—Before me is a large pile of bookshelves, rich in botanic lore, with a very slight mixture of other varieties; and behind is a cabinet and two piles of cedar-boxes, containing the treasures of the earth. The table I write at has a very miscellaneous cargo. Plants in pressing-books, mingled with "Scott's Life," Cottle's "Recollections of Coleridge," "Mrs. Dalgairns' Cookery," and several glasses full of specimens waiting to be drawn and described. Some of these are lovely; among which, staring me in the face, is an exquisitely beautiful Orchis (*Bartholina pectinata*), which I found yesterday for the first time—a slender stem with a solitary flower, large, blue and white, its labellum very extended; altogether a plant to be dreamt of rather than seen. Next let me mention a pot of *figs*, which I am pickling by way of experiment, a box of instruments, a paint-box and other learned lumber; a green veil and a tin box; and now I have shown my table to be pretty full.

I have just finished Cottle's "Recollections of Coleridge." I love and admire him more than ever, and, I must add, pity him also. His opium malady appears infinitely worse than I had any idea of, but it seems he latterly conquered it a good deal. Some of his letters when under depression are very touching. After all, what an awful landmark his life is to persons possessed of talents, though few are intrusted with such as his—a strange mixture of strength and weakness. I would place his life and works in the hands of any young person of talent, as books from which most important moral lessons may be drawn. But I grow prosy, and wish rather to walk than to talk.

Since my first letter from Summerville[1] days have grown into weeks, and matters still go on smoothly and well. I have got a hen sitting on thirteen eggs, but I don't reckon my chickens before they are hatched, though it is a practice I have largely indulged in my whole life long. I am sadly in want of another "clocking" hen for a batch of duck eggs that are waiting her convenience, and I shall then rest content. What with hens,

[1] He had called this place after his old home.

ducks, guinea-fowl, secretary bird, ostriches, antelopes, goats, dogs, horses, a nameless African bird of lovely colour but melancholy habits, rats, flies, &c., my family of live stock is likely to be a heavy one. But when they get tiresome, 'tis easy to get rid of them. The secretary bird is a fashionable one to have running about the garden in this country, as he eats frogs, slugs, &c., as well as snakes. I forgot another animal in my list. I am promised a *land snail* of large dimensions, from the interior—a beauty—of the genus *Achatina*. I intend to turn him loose, in the hope of his breeding. Yesterday brought me many letters, quite a fistful, from all quarters—including one from my old friend Arnott, of Arlary. He has found much novelty among my plants, and writes for others. I shall write to him to make descriptions of the Cape genera of grasses for my "Gen.," as I am too little acquainted with the subject to talk with pleasure of them, and he is working at that tribe at present. I find my "Gen." will be a work of more labour than I had calculated on, as I must write original descriptions from nature of at least nearly all that I can lay hands on, authorities are so little to be depended on. Now there are upwards of 500, and at fifty a week, which is fully as many as I can manage, here are ten weeks' preliminaries. Then there will be some weeks' arranging, correcting, and writing out fair, besides awaiting an answer from Arnott; so that six months at the least will go by before I attack the printers. I may publish my Introduction first, as it might lead to my receiving plants from different parts of the interior, when it is known they will be published. I purpose from time to time to give *monographs* of a few families, describing all the known species, with outlined drawings of the genera and guiding species. All these preparatory to the final *Flora;* but let me first *warm* one iron before I attempt to *heat* so many. Pray notice the subtle distinction between these epithets.

N. B. Ward, Esq.

October 15th, 1837.

. . . . Let me thank you for your admirable bulbing-knife, which has been adopted as part of my right hand whenever I go out. I find it extremely useful, and certainly it is a very pretty affair. For extensive bulbing, however, a small

pickaxe answers better in this country, where the ground is often as hard as the nether millstone. Yours is, however, very useful, particularly when one goes out on a half-and-half expedition.

Now for Cape affairs. Within the last week I have been up at five and in bed at eleven, and positively employed at botany the greater part of the time. There's energy! You see I am not going to be sleepy again. I found my unnatural repose comfortless enough. I have just been rejoicing for the first time in a charming orchis—which perhaps Loddiges have got—*Bartholina pectinata.* I never met it before, and you may be sure was extravagantly delighted with its beautiful lacerated labellum. I have a couple of dozen specimens in process of drying, some of which shall find their way to Wellclose Square.

My present whim is publishing, and I am actually busily engaged in two botanical works. The first the briefest introduction possible to the science, with a copious glossary of its terms annexed. Such a book is very much wanted here, where 'tis my belief the raw material of botanists is to be had in abundance were they only put on the loom and set going. I at least shall try the effect of a little exertion. This introduction will appear as the forerunner of a much more useful (and I may add laborious) affair, namely, the "Genera of South African Plants," arranged according to the natural orders. I hope it will be ready for the press in three or four months, not sooner; but really it is a heavy job, particularly to a person who has to seek his materials through a variety of books, and who is unavoidably ignorant of a great many of the genera personally. It is humiliating to be obliged to copy, as I shall be, so much from others; but as I look on this present work as merely an attempt to place a useful manual in the hands of persons here who have no other means of acquiring information, I am willing to submit to the character of a compiler. If the book proves really useful, I shall not want materials for correcting and enlarging a second edition, for specimens will naturally flow from all parts of the country when people find that there is a centre of information established in Cape Town. The final object of my ambition is a Flora of South Africa, south of the tropic. This, should it ever be published, is a very distant affair.

Can you guess my present favourite tribe of plants? Stare. *Compositæ!* I am quite in raptures with them since Decandolle has developed Lessing's system, which, in the bad shape it first appeared was a sealed book to me. Till now, this tribe was my aversion.

I have made arrangements with Zeyher who is at Uitenhage to collect plants to sell at two pounds per hundred. He begins in a splendid district, at a good season of the year, and then passes to any place where plants are to be found. Of course you know him by name.

October 22nd. My Introduction is nearly ready for the press. It merely wants the chapter on Morphology and the Glossary: the former will be written *con amore*, the latter *con bore*. I had a note from Sir J. Herschel, with a flower of *Satyrium Herschelli* (*Harv.*), a beautiful crimson orchis, with intensely scented flowers. This will be figured in an early number of my Cape Illustrations, but without colouring, and colour is what the Cape flowers pride themselves on.

November 7th. Up at half-past four this morning, and started for Campo Bay—a very pleasant walk, where I picked up *dirt*, and found a *Harveya*, apparently different from the *Capensis;* if so, the third species. I was up Table Mountain a few days ago, and gathered seeds of *Kaulfussia*!

Thermometer very high the last few days, nearly 100° part of the day. Evenings oppressive and breathless. Fine weather for drying plants—72° in the house—which is effected by having all the shutters and windows closed, to keep out the baked atmosphere. A pretty bulbous geranium with *jet-black* flowers is now in blossom in my garden. By the way, the *tricolor* is far rarer here than at home. I have not yet met a person who had ever seen it, though many know it in Europe: yet it *is* a Cape plant. Coals to Newcastle may not always be an absurdity.

December 4th. I have lately made a good many drawings in Indian-ink. Would I could colour, but it takes up too much time; twenty minutes is my fair allowance for a drawing, with all its microscopic analysis. My ostrich is grown "werry big," quite weaned, and his bed sent out to the yard, which is a great relief to my bedroom, where cleanliness has again taken root.

December 5th. No Table Mountain for this week; even my energy cannot think of a walk of twenty miles, with the thermometer 130°, and a roasting sun above my head. There are many plants there now that I especially want to gather; but these things cannot be helped, better lose them than run the chance of a sunstroke, or brain fever; so I shall stay at home and suck oranges.

To N. B. Ward, Esq.

Cape Town, December 11th, 1837.

I have now to thank *you* for a letter I have just received from Griffith, who seems to be fast amassing an enormous collection, and who offers most liberally to forward my views to the extent of his power, in Indian botany. Such a correspondent I specially wanted, one who could give me Indian plants, and who cared to take in return those of the Cape. Where there is a mutual interchange of *desirables* we shall probably get on pleasantly, and both our herbariums be benefited. I have just written to him: his letter is dated "River Hooghly," and he was then on his way to Assam, viâ the Khasia hills. From Assam he was to go to Bootan, in the Himalaya country, and thence to Thibet. A glorious field of observation to a person animated by his spirit, and with so accurate an eye as his has proved to be. He promises to send me his first parcel on his return, which I suppose cannot be till far on in the next year, but he gives me no clue as to when his journey would terminate.

December 14th. I was up Table Mountain yesterday, and got many interesting things, as usual. If I had time I should like to visit it once a week, from August to April, and once a fortnight the rest of the year, and I doubt not I should find enough to interest me; as yet I have only seen the summit three times in twelve months. What an idler!

To the Same.

Cape Town, February 8th, 1838.

As I am sending a packet, I may just as well ask you how you do, and what you are doing; *what besides* the routine business of asking old ladies after their colds and rheums, and so forth, wherewith I suppose this February "fill the dykes" has well supplied you. You may wish to know what I

am doing. I have just sent to the printer the corrected proof of *Terebinthaceæ*, to which that slow fellow has only yet reached. At the rate he gets on it will be *August* before the *magnum opus* sees the light. I have called a genus after the poet Crabbe. What think you of *Crabbea pungens?* He was very fond of botany, and has many very pretty passages about plants. See the descriptions of "Nature's ever-during stains," in the old church, and the Flora in the "Lover's Journey," &c., *passim.* Talking of poetry reminds me to tell you my motto for the "Genera." 'Tis from Coleridge, as follows:—

> And each little herb
> That grows on mountain bleak or tangled forest
> *You have learned to name.*

You will find the lines in "Remorse," where also is said:—

> I would climb up an ice-glazed precipice
> To pluck a weed you wanted.

I thought of this, but the first is better—I have sent a ream of paper to the Zoolu country, and one is going to Litaku, another to Klaarwater, and another is gone to Grahamstown, where more will probably follow: the last is to the 72nd regiment, who will, I hope, collect briskly for me, as they are fine intelligent fellows, and promise fair enough. I wish you would sometimes write and let me know how things go on: remember, I am shut out of all civilized society.

To the Same.

March, 1838.

You will be glad to hear that I have found a very pleasant botanical friend in a Mr. Bunbury, who has come out with General Napier on a pleasure tour. It is quite refreshing to meet a *real* botanist after so long a fast. We were up Table Mountain last week just in time to gather the last remaining flowers of *Disa grandiflora.*

When I have my case made, I shall attempt to put *Disa grandiflora* in its natural circumstances, and try whether it will blossom with more success. If you have living plants of it at Loddiges', perhaps you may wish to know what the natural localities of this plant are. First, as all the world knows, it grows on the summit of Table Mountain, and nowhere else. This

summit is very frequently enveloped in mist, especially at the season when the *Disa* blossoms. But it is very cold also, and the mist comes accompanied with a strong cold south-east wind. After this succeeds the scorching sun of lat. 33. So much for general circumstances: the particular ones are, that the plant *only* grows along the steep, boggy, spongy margins of a stream which has water in it *at all seasons*, but which in winter must be so swollen as to cover the plant. Here, the margin is completely clothed with the *Disa* to the exclusion of other plants. But immediately beyond the *Disa* is a margin of *Restias*, which growing taller than the *Disa*, and bending over the stream, afford considerable shade to the roots and leaves, at the same time that they leave the flower-stalks room to peep out at the sun and exhibit their large blossoms. All these, except the cold wind, can be easily managed in a case, and I should hope that our plant would have the good taste to forgive us that part. The shade, moist atmosphere, and soil, seem the chief things to provide.

Writing to Mrs. Leadbeater, he refers to the death of a favourite nephew, who had been carried off by malignant fever in the autumn of the previous year:—

"The death of poor James was indeed one of the most trying bereavements that has ever visited our family. The more I think of it the more I feel it to be one on which many others may hang. It is a nipping of the main sprout of the tree, and who will say that there is vigour to supply that which is taken? He was indeed but young—a boy; but one of such promise, and just verging on manhood; and to his loss was added the suddenness of the stroke by which such almost realized hopes were blighted."

To N. B. Ward, Esq.

March 18, 1838.

The trustees of the British Museum have recently written to our Government, and I believe to those of other colonies, begging circulars, for specimens of Natural History—plants as well as other things. From whom does this emanate? or are the plants wanted to feed vermin in the Museum cellars? If, however, young Victoria is stirring up its slumbers, and is determined to

have a Herbarium on the scale of the Royal one of Prussia or Paris, we shall be most happy to send her all manner of plants—nay, it will be our bounden duty; but unless there is a real, thorough reform in that Institution, it would be foolish to waste specimens on it. I hope when they do go about it they will form a *Geographical* Herbarium. Such a one in the British Museum, where there is ample space and funds, would be invaluable. Any one, then, wishing to travel in any particular country, might at his ease consult the plants of that country without wading among the endless cabinets he should otherwise be obliged to ferret through. I have a favourite *day dream* of having such a herbarium under *my* management, and of living the life of a bookish old bachelor within those venerable walls.

To the Same.

April 20, 1838.

Last week I took a trip to the Paarl, in the district of Stellenbosch; the first time I had been so far from Cape Town. 'T was but a flying visit; two days spent on the road, and two more in botanising there. I was greatly struck with the difference in the commonest shrubs, though the distance is but thirty-five miles. I spent one day in a trip to Drakenstein Waterfall, about twelve or fourteen miles farther than the Paarl. I got but little there, with the exception of *Weinmannia trifoliata*, which is the common tree about the Fall. There was, however, *Wardia hygrometrica* and *Andræa subulata* rejoicing in the spray. W. Rutherford took you some plants collected by the Rev. W. Elliot at the Paarl. This gentleman is now busily working for me. I found him in the midst of bundles of specimens, though the poor man was just getting rid of intermitting fever, which had been in his family for three months. There's zeal!—I hope to get many good things from him, as he is anxious to find and examine every plant within reach. Were all the missionaries like him, my Flora would be a hundred per cent. better, I doubt not. In these long winter evenings, I busy myself making a *multum in parvo* Herbarium, with specimens à *la Menzies*, for the convenience of travelling. They are glued on pieces of note-paper, which are then pinned four in a page in your "books." I calculate I can have a complete series of the Cape Flora within the compass of a small trunk. This will be useful when I visit

England; for collating with other herbaria. My stationary one I keep in the old manner and size.

To Mrs. L——r.

Cape Town, July 2, 1838.

My ostrich, I regret to say, has had the fate of pets; and, absurd as it may seem, the loss of the poor brute, like the prisoner's spider, has left a perceptible scar. These baby regrets I crush, for I despise them while I cannot help them rising. It is all very well for a young girl in her teens to talk about

> The nasty hunters riding by,
> Have shot my fawn and it must die;

but an old gray-headed man has felt so many real *sorrows* that there is a positive feeling of disgust at being affected by the little losses of such things. Perhaps disgust is not the right word, but something like it must do: and yet the loss of any constant companion, however humble, is sensibly felt, though we cannot call it grief in the proper sense of the term. No matter, I fully agree with you in the danger of making idols of the blessings we possess, and in my small measure I have felt it.

September 2. Have I news? None, and yet I paid four morning visits yesterday, only think of that exertion, the last of which was to Captain Stockenstrom, our Lieutenant-Governor of the Eastern Province, who is on his way to England, having passed through a torrent of abuse and slander, and expecting to return in six or eight months with flying colours. I hope he may, for he has been made a victim. And why? Because he does not think the natives are "irreclaimable savages," and recommends the discontinuance of fire and slaughter. Nay, acknowledges their rights of property, &c. Even in Cape Town he is far from popular. It is considered rather showing the cloven foot to speak well of him, and therefore from a feeling of opposition I took care to go in full pomp of circumstance to call on him, borne on wheels, though the distance was short.

To the Same.

Cape Town, September 23rd, 1838.

You write from Summerville, at least within the old walls, but probably seated at the *new* window that looks into the *new* garden, once the old—in a *new* damask-covered chair, and at a

rose-wood table, while the old walls shine with satin paper, and the light comes in through draperies of crimson and book-muslin. The maps of course have given place to gold-framed pictures, and the high old-fashioned chimney-piece is replaced by a modern structure of white marble. Now these are all, I allow, improvements; they show the progress of the world, and I don't object to them—nay, I like finery myself—but they are not part and parcel of my old home, of which you write, therefore I do not wonder at your not recognizing its features. If I were to see your fat boy now in petticoats, and lose sight of him till he appeared in all the plenitude of whiskers, and in the newest cut of the fashion, the identity of the two beings would seem strange.

James Backhouse is now here on his way home. He is an ardent botanist, and quite vivacious on the Flora and Zoology of the countries he has visited. I hope to have him on the top of Table Mountain before long."

Mr. Harvey passed through the Cape summer of 1837 without any great injury to his health, but in that of 1838 it was otherwise. His botanical ardour had revived, and had stimulated him to publish his "Genera of South African Plants," a work that entailed a vast amount of labour, which, added to his hours of duty at the Treasury, could only be accomplished by close application; fatiguing walks of miles in search of plants being his only relaxation. He worked on, however, under failing health, hoping when his task was finished that he should be able to enjoy the refreshment of a trip for a few weeks to the interior, but the pressure of business was such at the time, owing to the political state of the colony, that he was obliged to forego the indulgence. The arrival of Captain Stockenstrom at Cape Town just then occasioned much excitement, and Mr. Harvey warmly entered into his cause. Soon after this event he was obliged to succumb to illness and seek leave of absence for a voyage home, which soon effected a favourable change. He landed in England thin and worn, and his energy and spirits much prostrated, but his native air and the presence of the loved home circle soon restored him to his usual health.

The editor will conclude this year with a letter, relative to Mr. Backhouse, whose visit to Cape Town afforded Mr. Harvey much gratification.

September, 1838.

James Backhouse is still here. He and his companion go to the country this week, and will probably be a year absent in the interior—a very worthy, and withal pleasant pair. J. B. is full of anecdote and information of all sorts. He dined with us one evening after a walk to the hills and towards Campo Bay, performed, Vasculum in hand, in an *orthodox* fashion. As a minister I like him much, though perhaps I have had small opportunities of judging of his powers. He is a mystery to most persons here; they cannot imagine the object of a man travelling about without any apparently definite view. He is so unlike a missionary that he *cannot be* one—and what then, is a puzzle.

He will have much to tell on his return, as he is a very close observer of men and things. His account of the state of society in New South Wales is shocking, little short of disgusting to any one brought up with proper moral feelings, and certainly I have had no cause to regret not having settled there. Van Diemen's Land is better, owing to the long-continued care of the late Government; the other Australian colonies vary in degree, but in none is the tone of feeling on subjects of right and wrong, healthy. I fear, when he has seen the Cape, he will have to tell a similar story of us also: the fact is, that where men are thinly scattered over a country, as in all colonies must be the case, the check which society exercises on moral delinquency is loosened, and, unless there be real sterling principles for a foundation, the character deteriorates. You see in Cape Town a very great change for the worse in the children of European parents, even in the second generation: there is very little of a nice sense of honour amongst them.

I should like much to see the "Memoir of Hannah Kilham," for though I was too young to know all her value when she was in Ireland, I have ever had a veneration for her character, and felt an interest in all she did. I am in a very idle humour—not low, but somewhat listless. Just energy left to say Fahrwohl!

CHAPTER V.

LEAVE OF ABSENCE.

On landing in England, Mr. Harvey, before crossing to Ireland, proceeded to Torquay, for the pleasure of becoming personally acquainted with his valued friend Mrs. Griffiths, with whom he had familiarly corresponded for so many years. He gives the following account of this visit in a letter to one of his cousins :—

Cork, July 17th, 1839.

Enclosed are seeds of *Vicia sylvatica*, and of a pretty white cistus, both from Torquay ; also of *Matthiola*,[1] which grows on the northern shore of Devon. The *Vicia* was in superlative flower upon a cliff, at an exquisite little cove to which the Misses G——. introduced me. We had many pleasant walks over the hills and by the sea-cliffs and coves. The distant prospects of sea and country are pretty ; but, on the whole, Torquay is not that gem of beauty which I had pictured it. It is too much built—too fashionable. Babbicombe is really a charming little nook, but it begins to have too many houses, and is on the road to become vulgar.

Mrs. G—— very much like what I expected, only in better health, more active in mind, and younger looking : very kind. She wanted me to spend a month with her. Her two daughters pleasant and botanical. We had bad weather for *Algæ*, and in them did little : I have, however, a large package of puzzles—Do you envy me ?

[1] The native stock gillyflower.

Mrs. G—— was much surprised to find me so young; she had pictured to herself a quiet, squat, middle-aged figure, sober and staid: I fear I have lost ground by showing my *real*, the *ideal* being so much more author-like and responsible. She has persuaded me to undertake a manual of the *Algæ*, which I shall amuse myself at this coming winter, if Hooker can find a publisher. It is to be a "familiar" affair.

To N. B. Ward, Esq.

Dublin, Oct. 23rd, 1839.

I am inexcusable for never having written to you since I left your roof, especially in not having replied to your kind letter of July, informing me of the termination of poor Christy's sufferings. When I saw him in June I thought I was taking farewell of him, though I did not look to his end being so near. He seemed so wonderfully cheerful, and he spoke with interest of some bulbs I was to send him, and was looking forward with pleasure to a trip to the sea-coast.

The cause of my silence has been a dislike to writing, almost amounting to inability to string sentences together, under which I have been almost ever since we parted, and from which I am but just emerging. I suppose it is natural that the feverishness which I had so lately passed through should be succeeded by a dead and idle state of mind, which makes any exertion painful, and often impossible. This *ennui* is, I am happy to say, lessening, and I hope finally to drive it off, notwithstanding the dull days of November which are approaching. Perhaps one cause of it is the uncertainty which hangs over my future movements. My family are very averse to my returning to the Cape, and till the thing be decided one way or the other I find it difficult to settle down to any regular occupation. At the suggestion of Hooker and Mrs. Griffiths I have commenced a "Manual of British Algæ," but it gets on slowly, as I have not yet properly warmed to it. I am almost ashamed to mention Bentham's name, never having thanked him for the package I got from you in London, and yet you tell me you have *another* from him for me! Nothing, however, can be farther from my intention than to slight him, as there are very few whose acquaintance I am more desirous of cultivating. I look upon

him as being one of the most correct and acute of the new school.

I lately had a long letter from Dr. Griffith, giving an interesting account of his proceedings in the western parts of India. His collections in various quarters have been most extensive; but he had left the bulk of them in "deplorable confusion" at Calcutta; and I suppose years will elapse before he is able to set them to rights. Meanwhile his field-labours are rapidly extending. He seems a person of indomitable energy, and appears to bear the climate admirably. He will do great things yet, as he makes notes and drawings of all he meets with.

Pray remember me very kindly to our venerable friend Menzies when you see him. I have one or two little things for him which I only await an opportunity to send. Though I have not written, you have seldom been out of my thoughts for many days together. Let me soon hear from you. Pray remember me very kindly to Mrs. W., and believe me,

Ever your affectionate Friend,

W. H. Harvey.

I heartily wish you would publish a full account of your method of growing plants. It is provoking to have it so often misunderstood.

To the Same.

Dec. 20th, 1839.

I take advantage of the new postage to enclose you specimens of an extremely beautiful plant. It is one of a collection which I lately received from Hooker to name and to take duplicates from. I shall tell him that I have sent this to you, so you will please consider it from him, for I merely take liberties with his property. You will please appropriate one-half, and hand the other over to our venerable friend Mr. Menzies. But *first* I should be glad you would show it to Robert Brown, and ask him is it not the same he formerly showed me in his collection; also whether he has named it anywhere; and if not, to show cause why I should not dedicate it to my friend Miss Ball, a most zealous and successful Irish algologist, and who would rival Miss Hutchins had she equal opportunities. You will see it has the substance and fruit of *Sphacelaria*, but the

colour of *Callithamnion;* and however unimportant colour may be in other plants, you know that in the Algæ it is usually considered of first-rate value. Alas, that it should be so fugacious! for some of the specimens, as you will perceive, have faded into a dirty green, from which it passes to white. In its green state it might be taken for a *Sphacelaria*, and indeed closely resembles *S. Callitriche* of Agardh, from the Falkland Isles, so much so that I almost fancy Agardh had a faded plant; but of this there is no proof. However, there can be no question that if Agardh had a specimen in its red or original state, he would make a genus of it, as I have done, and place it among the *Ceramieæ*. I have seldom met with a more beautiful microscopic object, and strongly advise your putting up in Canada balsam some fragments—the *best coloured* you can find. It keeps its extreme beauty under a high power, and has already delighted our chief microscopists in Dublin, and will, I doubt not, equally delight your club. Mind to moisten the specimen so as to expand the tissues before examination. The collection contains several very pretty and some curious things, and makes me long more than ever for a ramble on those Australian shores which have been so long the object of my dreams and wishes. I go to Limerick in a day or two, and shall be glad to hear from you there what Brown says of this Alga.

I am getting on but slowly with the "British Algæ." These dark short days one can do but little, and my eyes will not bear the microscope at night. In the country I shall work with greater ease.

To a Cousin.

Dublin, March 14, 1840.

The time for my departure for Ausonia approaches—Egypt is given up. We go only to Italy, amongst whose modern ruins (modern compared with Egypt) there be many things to arrest one.

I got, a few days ago, my long-expected parcels from Mrs. Griffiths, from Assam and Birman Empire, amongst which are many beautiful objects, and some rarities; many ferns, of which one is *Kaulfussia assamica*, a very singular but by no means pretty plant. 'Tis not unlike a leaf of Cow Parsley, but its fruit is very curious.

I have also had a package from my friends the soldiers at Port Natal; some good things, amongst which is a new genus belonging to a very curious natural order, of which only two genera, each consisting of a single species, were known before, and these are natives of India! This, of course, is a prize of the highest order in Geographical Botany. The new creature is a true *Peddiea Africana*—Harv.—to be forthwith figured in "Hook. Journ. Bot." It is called after Col. Peddie, who lately commanded the 42nd. These Natal plants have set me agog for Africa again, and I am already planning a little book, "Specimens of the Botany of Port Natal."

To Miss F——l.

London Coffee House, March 18th, 1840.

We are so far arrived on our route to the "Imperial City," from which you may expect a line in about a month from the date hereof. . . .

It is amusing to witness the many freaks in which the Albert mania continues to exhibit itself in the shops. Albert everything, from hats to shoe ties; nothing too small or too large to be under his patronage. Another thing which strikes me is the increase of Greek names for shows. For instance, Picture Galleries are now *Pinacothecæ*, which of course is a great improvement. I forget the name, but it is equally difficult to the mouth, for the patent machine for hatching eggs, where, as saith the advertisement, "countless living creatures, from the wren to the eagle, are ushered into life by artificial aid," &c. You gaze on a large tray of eggs, in the last stage of incubation, and, as the fortunate moment arises for the young being to make its début on the theatre of life, behold! a crack, a chirp, a leg, a head, and finally the body of a living chicken! Dear, but 'tis a strange world! When I see the animal magnetism, which I hope to do, expect another letter.

To a Cousin.

Rome, April 16, 1840.

One cannot be at much loss to fill a letter from Rome, the only difficulty being what to select to trifle on. One is like a child in a toy-shop, delighted with everything, and sadly puzzled

on what to expend his sixpence. Well, let us take things as they turn up without consideration. I have just come from a moonlight stroll to the Colosseum, down the Corso, through the Via del Foro; then by the base of the Capitoline Hill, through the Forum Romanum, under the Arch of Titus; walking on the Via Sacra, passing the Cæsars' Palace and the Temple of Peace, and so coming at last to the Gladiators' Bloody Circus. The night was everything that one could wish, perfectly still—the moon nearly full and dazzlingly bright, the sky *Roman*, and the city silent as the desert. Just as we passed the Forum, an owl on the Temple of Peace began hooting to another perched amid the confused piles of ruins, where the Cæsars' Palace stood, "who to him made answer meet." How fortunate! enough to make us compose, had we the romance of our young days! There were no other sounds. Rome at night is perfectly still, and the streets nearly empty, save of tourists. The Colosseum has far surpassed all my preconceived notions—its vastness, and the perfect beauty of its present ruined state, combined with the recollection of its former grandeur, render it most imposing. About half the outer walls, which are of cut stone of a reddish brown colour, has been carted away to build palaces and churches; but what remains is wonderfully perfect and fresh, and the dismantled part is now so beautifully clothed with shrubs, mosses, and flowers, that it perhaps adds to the beauty of the whole. The late popes have taken much care to preserve what remains by building buttresses and repairing broken arches. This has been done without at all disfiguring the building; these modern props being of the same stone and architecture as the ancient. And what be the shrubs and kinds of flowers that act the part of the robins in the "Babes in the Wood," &c.?—shining-leaved laurustinus, ivy, cypress, acanthus (looking more beautiful than I ever saw it; it makes a glorious *old-wall plant*), wallflower, a beautiful purple anemone, and a great variety of smaller plants, many unknown to me. But I have omitted one of which there is great abundance under the arches—*Adiantum-cap-veneris*, which makes a most lovely drapery. With such softening as these plants give to the decayed walls, the unsightliness of the ruin completely vanishes, and one heartily subscribes to Byron's expression, "ruinous perfection." The more you see of it, the more you are struck

with its vastness. Even at a first glance there is nothing to disappoint you in this way, which is by no means the case with many other large buildings. One thing about it I was not prepared for—to find that it is dedicated as a Christian church, and that a large cross stands in the centre, where Nero's statue stood. What a contrast! Were this all, it would be well, and we Christians would certainly have no right to complain that the arena of blood was converted into one of prayer, but the circus is defaced with fourteen little altars, over which are ill-done paintings, representing passages in our Saviour's life, and on the walls is stuck up an inscription, that a year and forty days' indulgence may be obtained by kissing the holy cross—cheap terms, truly! Similar signboards are so common here, that I should not think this worth mentioning but for the place where it is stuck up. Almost every church has something of the kind. *N.B.* I don't think the Roman Church a bit altered in these respects with the times. However she may appear to you in Ireland, here she is just the same old lady as ever she was. Well, no matter. What next? St. Peter's; a church or temple, which has vastly surpassed my notions, though I have not perfectly seen it as yet, not having been in the dome. You know I am prejudiced against the Grecian architecture in Christian churches, and even after seeing St. Peter's, I still think there is nothing so suited to our religion as the Gothic, whose very irregularities are an advantage. But St. Peter's is so vast and stately, so richly adorned with marbles and statues, with gilded roof and mosaic floor, and yet the whole so nobly chaste, that it insensibly wins upon the mind and compels it into feeling the sanctity of the place. Many of the Italian churches are so overloaded with ornament, that you are as much disgusted as with a vulgar Lady Mayoress dressed in the pink of the fashion and full flounces. But this is not the case here. It is so large that there is room for an almost unlimited set of statues, and accordingly there are countless marble monuments of popes and such like, besides the statues of the apostles and saints, with great abundance of little angels, &c. There is not much painting save around the roof, at a considerable elevation. This is quite an advantage, for most churches here are a great deal too much painted. Then the immense length and height of the aisles, the breadth

of the great dome, with its splendid altar beneath it, the canopy of which, though as high as Nelson's column, looks but small and low in comparison. On the whole, one is really struck into littleness, which I take to be the great use of building stately churches; and here the architect has completely succeeded. Among the monuments is one which you would have looked on with much interest—that of the last of the Stuarts. It records the names of James the Third and of Charles Edward, and the late Cardinal of York, the last of the ill-fated line. Opposite is the tomb of the queen of James the Second. To-day we were eight hours in and about St. Peter's, having gone early this morning to hear mass in the Pope's chapel, see the procession of the host, and afterwards see the Pope wash the feet of thirteen pilgrims, and then wait on them at table. Of course there was a terrible crush, but we contrived to live through it. The Pope (of whom they give a very good report) is a pleasing-looking old gentleman, with a very big nose, takes snuff, and seems at least sixty-eight or seventy. He got through very well. Washing the pilgrims' feet was rather a queer sight, and quite a burlesque of the example which it is intended to imitate. It took place in one of the side aisles of St. Peter's. There was hung up a tapestry copy of Leonardo da Vinci's Last Supper, surrounded by a wide border of crimson velvet and gold lace. Under this, on a high bench, sat the pilgrims, clad in white, with white caps. We and a dense crowd were below, as in the *pit,* while boxes were prepared for the ladies and a few privileged gentlemen. After a while came in a troop of bishops and cardinals in their robes, then the Pope and his attendants. He was clad in a crimson silk dress and mitre, with a very broad and richly ornamented border of gold lace, &c. His supporters led him up to a high throne, under a canopy, whereon he sat while some service was singing. Then came a priest, attended by two others with large candles in glass candelabra, who knelt before him, when the supporters (above mentioned) held open the scarlet robe and showed us his nether garments, while the priest in front shook a golden censer before his holiness, which sent up a smoke, whereon the supporters shut up the papal legs again cosy and snug, and the service went on. After a while a prelate approached the Pope with a white apron, the scarlet robe and mitre were laid aside, and three or four prelates helped

his holiness to walk over to the pilgrims, whose right feet had previously been bared by another set of bishops, the left feet not requiring washing. A gold basin and ewer were then brought, and the Pope poured water on a foot, wiped it, and went on. We waited to see him do two, when the crowd gave token of moving, and we followed it, for we had next to run a considerable distance up sundry flights of steps to a room in the Vatican, where the pilgrims were to dine. Here was an awful crush, but we contrived to find tolerable places. A table was spread out, on which were gilt figures of all the apostles, each about twelve inches high, and in the centre a figure of the lamb. Presently came the pilgrims and sat down; after them the Pope and his helpers. First he poured water on each of their hands; the basin being held by one bishop and the golden ewer by another. Next a bishop on his knees presented a plate of soup to the Pope, who took it, and handed it to a pilgrim. Then another bishop did likewise, and so it went on. The Pope thus handed seven courses to each pilgrim, having first received the dishes from a kneeling prelate. Then he washed his hands and went away, and so did we. And now I'll go to bed, as it is Good Friday *morning*.

18th. I have seen a great many queer things since I wrote last. On Friday we went in a shower of rain, under an umbrella, into a cabbage garden, where, after some groping, we found a wall faced with rough stone, continued till it ends in a natural rock. What was it? The Tarpeian!—down which they throw cabbage-stumps in these degenerate days. Many of the relics here are equally well worth seeing. Not so others. The view from the tower on the Capitoline Hill is still a noble one. There be ruins, mountains, a plain reaching to the present city, and the Tiber. Two favourite trees here are the cypress and a species of pine, which I do not remember to have seen before. Its top is flat and umbrella-form, and when large looks remarkably well. We are nearly tired of seeing churches. They meet you at every corner. All of them are more or less splendid inside, and many are fine buildings without; but on the whole less striking than the Gothic structures of the north. There is not a Gothic one amongst the whole 365 which they count in Rome. To-day, by mere accident, we got into an Armenian church at the commencement of

service, which, to judge by the crowds of strangers that followed us in, was one of the sights of the day. The service was chanted in Armenian by about ten priests, dressed in very showy vestments of divers colours—to wit: green, rose colour, crimson and yellow, according to their rank, with sashes of gold, and blazonry thereon. They wear beards. The bishop was a remarkably fine-looking old man, with a long white beard and superb vestment, and got through his business in a very stately manner. 'Tis strange that what *we* saw should be called Christian, and founded on the New Testament. To be sure we did not understand a word of what was saying, and that makes a serious difference; but the ceremonies and clothing were very unlike our ideas of the simplicity of Christianity, though not more so than in the Roman Church, with which the Armenian holds communion. This morning we went to see a Jew and a Turk baptized, which is one of the annual sights of Easter. Unfortunately there was little appearance of convincement. At this time no Turk could be found, but we saw a Jewess made a Christian of—whether hired for the purpose or not, cannot say: a vast deal of mummery about it and a great crowd of gazers: had to pay a *paul* (?) for our *stand*, and got crushed into the bargain. A cardinal officiated, and I cannot say how many lusty priests, grey-haired men, strong men, youths, boys and children. A cursory walk through the Vatican Museum occupied three hours. It contains interminable galleries of ancient statues and sculpture of various kinds. There is of course much to look at, but without repeated visits little to carry away in the memory. There are the Laocoon and the Apollo Belvidere, with which we were already too familiar to be struck dumb with admiration. But let that pass. One apartment contains three fine statues by Canova; the only ones by that modern master we have yet seen here. The pope's second museum has the Antinous, the Dying Gladiator, and the Roman Venus, with which we were less familiar, and consequently more struck. The sickening agony of the gladiator is wonderfully expressed, and under a proper light must almost be equal to life; but there is too strong light in the room to see it properly. For my part, I have been more impressed by a statue comparatively modern—of which we hear nothing—than by these celebrated antique ones. The author is Bernini,

and it is placed in the tomb of the Corsini family in the Church of St. John in the Lateran. This tomb is in a large circular room, placed under a chapel, and dimly lighted by a grating in the roof, which is the floor of the chapel. The sarcophagi of the family stand round, and near the middle of the apartment is this exquisite group in marble. It is shown by the light of a small *torch*, which has an astonishing effect in heightening the expression. The figures are the Virgin supporting the dead Christ, and the exquisite expression of maternal sorrow thrown into her face and figure is really wonderful and most touching. Had I been alone, I could have wept. The figure of our Lord is admirable, and the way in which the artist has expressed the flesh—torn by the nails in the hands and feet—is what I did not think marble capable of. The face is all that one can fancy of the settling down of agony into a holy serenity. It is in fact such a group as would almost make us tolerate the imagery of the Roman Church, and certainly is one I would give much to have an occasional opportunity of visiting.

Easter Sunday evening. This morning early we sallied forth to St. Peter's to see High Mass performed by the Pope in person, and to see him give the pontifical blessing. At the upper end of the church a throne was prepared under a fine canopy of crimson velvet and gold trappings, and raised on seven steps covered with rich carpet. This was in the centre, immediately under the eastern window, which contains a transparent image of the Holy Ghost and Glories. On either side were benches for the cardinals and bishops, and at the right hand, near the altar, below the cardinals' benches was another throne, smaller than the preceding, and with fewer steps. The area was enclosed by gentlemen of the body guard in splendid uniform. Round about stood the profane and faithful vulgar blended together, and among them we. About ten o' clock a sound of *martial* music was heard, the great doors of the church were thrown open, and the procession entered. First came lesser orders of the clergy in black; then some in violet and lace, others in scarlet (names unknown); the bishops, in silver and gold tissue, with white silk mitres. Then cardinals in silver and gold, very richly embroidered, with train-bearers. After these the officers of the household; then the cross and seven candle-bearers. Then a long line of officers bearing the Pope's

different mitres and his *grand* tiara, blazing with jewels and gold. Then the Pope himself, carried in a crimson chair on men's shoulders, under a silver and gold tissue canopy, supported by sixteen golden poles, and having at each side a man bearing a pole with a huge fan of ostrich feathers. After his holiness came his personal attendants, which closed the procession. They came up the whole aisle of the church accompanied by a military band, and soldiers ranged at each side. A very splendid procession, but, to my heretical eyes, rather unseemly in the house of God. As they passed the altar they made homage, the bishops and cardinals doffing their mitres; and when the Pope came up and was set down, he took off his triple crown, putting on in exchange a gold tissue mitre; then he knelt down and said a prayer, the cardinals, &c., kneeling about him. He then rose, and was led to the smaller throne, where he sat down, and while the choirs were chanting, received the homage of his court; the privileged kissing his hand, the lesser his knee, and the least his foot—a strange place, it seemed to me, for a Christian bishop to choose in which to receive honour from man! When part of the service went on he removed to the higher throne, where he remained seated the greater part of the time. Occasionally books were brought to him, and he read a few words, to which the choir responded. At length he came forward to the great altar to celebrate the mass. Here we had an excellent view of him, as we were standing just below the altar. On the elevation of the Host, every one knelt—cardinals, prelates, guards—all, save the heretical English, who stood stock still. We were, however, too numerous a body to feel ashamed of our conduct. On the whole, I am disappointed with the ceremonies of the Catholic Church. To me they are not impressive, for they are not simple enough in my mind to suit the majesty of the subject. What are all these fine clothes and candles and ostrich feathers? With a semi-barbarous people 'tis all very well; and the kissing of the books and the bowing to the altar; but when one thinks for a moment, while it is going on, of the *book* on which all this parade is said to be founded, and remembers our Lord's discourse with the woman of Samaria, the very splendour of the scene, instead of impressing you with holy awe and feelings suitable to the worship of God, disgusts you with its littleness, and wearies you with its mummery. My admiration of the Reformers

has certainly been much increased since I came here, and I can almost forgive Luther for breaking unity with the church of his day. In *theory*, I still condemn him; but really it is difficult for flesh and blood to bear patiently with such lesser corruptions as the Roman Church is full of. How thankful ought we to be to the heads of the *English Church*, who brought her (under God) so safely through the troublous seas of those times—freed her from the mud on which she had well-nigh stuck, and launched her again into deep and pure water. And this was comparatively in the dark ages, when men's minds were but beginning to be awakened, and when the dangerous, because *two-edged*, sword of Reform was placed in inexperienced, though zealous hands.

21*st*. It is almost time to bring this letter to a close. It has lain by while I have been running about from one sight to another, enjoying the moments as they pass. Well, the Easter mummery is over, and I am heartily glad to get done with it. The prettiest sight of the whole was the illuminations—St. Peter's on Sunday night, and the fireworks from St. Angelo on Monday. Imagine the vast mass of St. Peter's lighted up with some 5000 lamps from the base to the cross above. These have much the effect of the brass nails ranged in lines on a large black trunk. This for the first hour. Then, at a given signal, instantly sprang into life thousands of flaming torches, which converted the whole surface of the church into a blaze of light. At a little distance, say a mile or so, where the whole could be taken in at a glance, it had greatly the character of a diamond-beetle under the microscope, the flitting of the lights adding much to the brilliancy. The fireworks from St. Angelo were splendid, but nothing very emblematical of the day. They were said to represent an eruption of Mount Vesuvius. The crowd were orderly and very quiet, and our pockets were not picked. Italy is a glorious climate, but a sorry people—liars from beginning to end, beggars from the highest to the lowest.

From Naples we go by sea to Leghorn, and then visit Florence, Milan, and Venice. I propose to start from Trieste for Resina on the second of June, and then homeward by the shortest route.

To N. B. Ward, Esq.

London, June 18, 1840

I arrived here last evening from Ostend, after a delightful ramble through Italy and some of the better parts of Switzerland, returning home by the Rhine and Belgium. I enjoyed it much; but often regretted that I had not laid myself out for collecting plants as I went along. Had I made preparations I might easily have added a few hundred interesting things to my herbarium. It was particularly pleasant to gather in the wild state several of our garden flowers, and to see whole wildernesses of myrtle and asphodel. Then, on the higher Alps, great patches of *Gentiana acaulis*, and the still more brilliant *alpina* (is it?); *Primula farinosa*, and *auricula*, with a great many other bright little things, spangling the ground and often peeping out from the snow.

The relaxation enjoyed during this visit home had so far re-established Mr. Harvey's health, as to lead not only himself but his friends to hope that, at the expiration of his leave of absence, he might safely resume his official duties at Cape Town; and that, being now, in a good degree, inured to the climate, he might, by avoiding over-fatigue and unnecessary exposure, pass through the summer months without any ill consequences. His situation as Colonial Treasurer was too important and advantageous to be lightly surrendered, and he therefore again prepared to take leave of his friends for a return to a foreign home, which, except for its botanical attractions, had become increasingly distasteful to him.

To a Cousin.

Dublin, July 5, 1840.

My passage is taken, and baggage shipped, and I leave this in four days from the present time. You may wonder at my writing so merrily, but fortunately the heart of man is made, if not of india-rubber, of something nearly as elastic; and Hope tells a flattering tale sometimes, which one is too ready to believe. She tells me just now that I shall return in a few years, and pictures pleasant ones in my own green land. I go in cheerfulness and content, intending to use my best endeavours

to shorten the term of my captivity, and to return the moment that prudence bids me. This is looking to the bright side. The reverse of the picture—fortunately, that is hidden from our eyes. If we do our best what more can we? It is a long time to look forward to; yet with steady occupation it will pass over smoothly, and should my life be mercifully spared, I may yet return to go no more out, and perhaps to be a useful member of society.

To N. B. Ward, Esq.

Dublin, June 22, 1840.

I rejoice that you have been able to pay so agreeable a visit to our friend Mrs. Griffiths. Would that I could have been with you! I dare say I should have enjoyed myself as much as in Italy, and have been far more usefully employed. My visit to Torquay was, you know, very hurried, and the weather unsettled the whole time. 'Tis a beautiful place—pity there are so many fine houses: the country about it is charming. I quite envy you the tour of Devon and Cornwall, with all the interesting botanical stations.

You have heard, I suppose, that Cuming is home with an enormous collection of plants and shells, and an innumerable number of ferns. It was delightful to meet Hooker in London, and we remained together the following day, till he shipped me off in the railway carriage.

I am busily employed making my preparations to sail 26th July, and expect to be in London by the 10th. I wish to get a couple of cases from Loddiges', and shall feel obliged by your dropping them a line to prepare them. I should like to have *Nepenthes*, and the large crimson passion-flower, and some creeping plants loving a moist heat. In another case some handsome camellias; moss-rose, white and red; *Fuchsia fulgens* and *globosa*; any pine-trees that they think would grow (we have only the stone-pine and Norfolk Island in the Colony); *Salvia patens* (is it not? the large blue one now so common); finally, the best variety of strawberries, both white and red, and anything else, Californian or otherwise.

I expect to be at least ten days in London, and shall certainly lay out one for our venerable friend.

To the Same.

London Coffee House, July 17.

The sight of your writing again was very pleasant, though it brought me so indifferent an account of your health. It does not become me to scold you; but, my dear friend, I would implore you to keep within bounds in your scientific labours till you are completely restored. According to your own account, you have worked too hard at the microscope; and from others I hear that you were in the habit of taking long and fatiguing botanical rambles. Perhaps you have done still worse in combining both; spending your days in the field and nights at those weary glasses. A little of either is perhaps the best thing for you; but *so* much as you have indulged in cannot be either good or proper. I hope, however, you are now convinced of the impropriety of overtasking your returning strength.

Thanks for the pretty specimens of *Listera cordata*, which it is interesting to find in so southern a locality. I never saw it growing, though I think I have Scotch specimens. These, however, I shall value particularly, as coming from you and from Devonshire. I hope to see you this time *five* years, to which I am limited by promises to my family, and by my own inclination. I cannot afford to spend the best of my days so far away from all I love. I shall certainly see Mr. Menzies before I go, and will give him your message. Farewell, my dear friend. I shall look anxiously to hear from you after my arrival at C. B. S.

July 24th. I dined with Mr. Menzies the day before yesterday, and found him fresh as ever, and very busy with some Madeira ferns. I have sent him a package of Cape Algæ, containing all my duplicates, to rummage over. I brought it, intending to leave it with you for yourself, or others, but know you will not object to the old man's having the overhauling which gives him so much pleasure.

To a Cousin.

London, July 23.

This is my last night in London, perhaps my last on terra firma, for to-morrow evening I am to join the ship. We sail on Saturday at the peep of dawn, and by the time I rise to break-

fast it will please me to see the shores of old England waxing dim, and at eventide (as a great poet hath said)—

> To watch the Lizard's burning eyes
> Fade in the darkly shrouded skies.

It is natural that my last letter from shore should be a sober one; yet I neither feel particularly so, nor the contrary. I try to think little of the matter at all; and when it does rise up like a spectre before me, I lay the monster as quickly as possible by telling him to lift up his veil, and show me the future peeping through. Then I put up my perspective glass (which those who live on the delectable mountains have skill to look through), and I peep into the things behind the veil, and see pleasant pictures to dwell on.

I do not at all wonder at that seeming deadness that you complain of. It is most natural that the mind should sometimes fall into that state, though it is very painful to bear. Persons on the rack, it is said, after the first half-hour, become *indifferent* to pain—not *insensible*. And so it is with grief. After the heart has gone through many trials, it seems as if the new ones, even though they be great, could not add to the weight of those it already has. A quiet sort of resignation insensibly succeeds—a looking forward to another world, and a feeling that it is not worth while to think of the sorrows of this when it is so transitory. Religion doubtless soothes the mind, but even the irreligious fall into a somewhat similar state.

To N. B. W., Esq.

Lord Hungerford, at Spithead.
July 25.

My dear Ward,

I wrote you from London, and just mentioned in a postscript that I had received your welcome letter. It is welcome, for it brings me news from your own lips of your continued improvement. As your strength grows I trust the eye will improve with it. Is not that the general result in such an affection? Still, for a botanist to be debarred the full use of his eyes, and placed at the same time in the midst of new and delightful food for them, is, I confess, a hard trial of patience,

and I can truly say, when I scolded you, as you call it, it was more in sorrow than in anger. The society of the circle you mention must be very pleasant. It is a great privilege to be thrown into a group of superior minds, and their conversation will supply the want of your full indulgence in your favourite study. Many thanks for your extract from "Salmonia," which I have transferred to my Bible according to your hint. It is very beautiful and new to me, for though I am well acquainted with the "Consolations," I have, strange to say, never read the "Salmonia." Of the "Consolations," I like "Proteus" the best. I think Sir Humphry would have been a great poet, if he had cultivated the talent. It is said that Coleridge used to attend his lectures, not from taking an interest in the subject-matter, but for the sake of the felicitous illustrations that flashed from him continually.

I paid a last visit (not the *last*, I hope) to your fern-house on Thursday, and think I never saw it looking so well. It will be long before the walls of mine are so beautifully covered. I must send you a large *Hemitelia*. I intend sending several, as tall as will fit in the cases I am taking out.

I opened a book yesterday called "Fact Book for 1840," or some such name. The first botanical *fact* stated was "Plants grown *without air*," by Mr. Ward. Can you tell me, is it a *fact?* There is an experiment much in your way, which, if it could be tried, would be an important one; but I fear it is impracticable. It is whether plants exposed to no other light than what are called the *chemical* rays, which you know are *invisible*, would grow *green* or any other natural colour, or whether they would be white, as if grown in total darkness. Do you think one could contrive it, and what would be the best plants for experiment? As we have constant sunlight at the Cape, I could perhaps manage it there. The point I want to throw *light* on is the colours of *Algæ* at great depths of the sea —where common light is entirely intercepted, but where perhaps these chemical rays may penetrate. If we could prove that *they* were sufficient to cause perfect colours in vegetables—as is probable, seeing they seem to be the most active in properties—one might infer that *they* were the colouring agents in "those dark unfathomed caves." If you think the experiment worth anything, please, at your leisure, send

me a suitable prism for fixing in a window, and charge it to my account. Farewell, my dear friend. If long detained here, I shall write again. If I write not you may fancy me in "Biscay O."

Yours ever,
W. H. Harvey.

To a Cousin.

Ship Lord Hungerford.
Spithead, July 26.

Not gone yet! nay, verily, and not going. To-day is called Sunday, and, as a child once said, "so it is, for the sun is shining," but that is the only sign of Sunday about us, for from an early hour this morning there has been nothing but hauling and yee-ho-ing, and it is likely to continue so all day, for they are busily getting stores on board, so as to leave if possible to-morrow. There seems no end to the casks, cases, boxes, baskets, and hencoops; no sooner is one large boat gone than another makes its appearance. At one side of us is a schooner full of stores, and at the other a sloop, and these are both busily engaged disgorging their contents, which vanish into the mighty chasm of our hold and are seen no more, and still there is room. It would take up too much space to give an inventory, but it may amuse my uncle to know that we could stock a pretty large farm from our living things, besides furnish a large house from our dead stores. There are twelve horses and seventy dogs, besides a litter of pups, which have come into being since we started, and there is no telling how many more we shall have before we are far on the voyage. Then there is a flock of sheep—perhaps fifty or sixty, but I have not heard them counted—a drove of pigs, three cows, and three young calves, thirty dozen of cocks and hens, six dozen of ducks, and as many geese, and a flock of turkeys, besides sundry smaller beasts. But if we excel in any sort of live stock it is in cockroaches; I cannot tell their numbers. I wish we could send them into the sea, but they do not seem disposed to go. For specimens of the human family I suppose we shall muster a hundred, of whom twenty-seven are of the "elect,"—they who sit in the "cuddy"—which is our test of respectability in this our little world. Of these nobles I have yet seen few. We have

a young married couple, very like specimens of that variety in general, and perhaps they may afford amusement. Then we have a quiet old bachelor, like myself, and I think he will suit me very well. He is going out (poor man!) to *endure* an income of 12,000*l.* per annum—*endure* I say, advisedly, for 'tis his first voyage, and he does not yet know the delights of a nabob's life, and doubtless when he returns it will be with more of the presence of a man of pockets than he has just now. Of young ladies the result is yet unknown; we shall see by and by. The arrangements for walking are good—a fine sweep of quarter-deck—and the poop affords room for lounging to perfection, so I hope we shall get on pleasantly. I hear a voice saying, "Is the chess-board come on board?" so I suppose we shall have a little of that dissipation.

My cabin is snug, and I have two book-shelves: the one contains Cowper and Crabbe—my companions—and a few books of light reading; the *other*—which is secured with double stanchions—is full of weight and wisdom, the contents being selected by our friend the Doctor, to whom I gave the order, "Let me have 4*l.* worth of Divinity;" and for this sum I have a good many of the old worthies—quite enough of that sort of reading to keep me in *tune*. I was rather badly off for a variety of such food, of which I have now a full supply, and (as Dr. F——r chooses it) doubtless of the best flavour.

CHAPTER VI.

THIRD RESIDENCE AT CAPE TOWN.

Cape Town, October 12, 1840.

I ARRIVED here on the 5th inst., after a passage of seventy days—a week of which we were detained in the Channel. I was not altogether idle during the voyage, and so not given up to unhappiness, and I am now settling down in good health and spirits at the scene of my labours for some five years to come, keeping a steady eye to my good resolutions.

I found my house in good order, and my green-house ready to receive plants; but I foresee that I shall have to get a man to bring water—four buckets a day—if I grow *Orchideæ* or ferns. This is a sad thirsty climate, and it is most difficult to keep the atmosphere humid. Most of the plants I brought out with me are alive. Amongst those I mourn for are the fuchsias, both of which suffered from being put in too moist a case. *Salvia patens* has had a hard struggle, but a hopeful shoot is springing up. *Nepenthes distillatoria* is in perfect health. One of the *Epidendra* blossomed on board; and a fine *Cypripedium* is just now pinking the tips of its bud. The garden out-of-doors looks fresh and green, but is just now covered with a luxuriant crop of nettles and *Polygonum aviculare*, but will soon put on a new face, as we work vigorously at it in the cool of the morning. M—— and E—— have been great vegetable growers this year. They have been eating their own potatoes for three months, and have three months' more supply. M—— digs the potatoes every morning, and it would amuse you to see how carefully we pick up the little ones, down to marble size, for when carefully scraped they do for putting in the soup! we cannot afford to lose any.

J. Backhouse is still here, and has just come in with some

seeds he has collected in the interior. There is also a specimen of a new genus of *Zygophylleæ*, which I call *Backhousia Australis*. It is a peculiarly appropriate plant to record J. B., if we look for those pretty analogies, or rather allegories, that Linnæus was so fond of finding out, for the flower is plain enough for a Quaker, and of small and modest dimensions, while the fruit (by which a tree should be known) is the largest in the order, and of a bright glossy red, so that a bush in berry must be a very handsome object. The allegory, however, must not be forced too far, for those berries that look so beautiful without are empty within—of no more substance than the bladder cherry. J. B. will probably be here for some time longer, and I look for many pleasant rambles with him. He takes four hours' exercise daily for health's sake, but is in the habit of walking in the heat of the day, which I am not able for, so I shall confine myself to his evening exercise. He has established a school here for the children of the poorest classes—both coloured and white. Those who can afford it pay, and those who cannot are taken gratis. There are at present about fifty scholars, but room for more, and when it has been at work a little longer it will, I hope, go on well. J. B. takes no violent measures to get scholars, or to overcome prejudice, but by little and little gets along. He has been fortunate in securing an excellent master and mistress. The man was a Quaker, and educated at Ackworth, but I believe left the Society of Friends; however, he afterwards became serious, and had an idea that it would be required of him to come here and engage in education; but not being sufficiently clear in the matter, he put it away and went to other business. However, for some reason which I forget, he took to *sailoring*, and his vessel was wrecked on our pleasant shores, and so he stayed, offered himself to the Wesleyans, and for some years conducted a school for them, till it was given up. He married one of their body, also a teacher, and so went along, still wishing to devote himself to the instruction of the poor; but the Wesleyans no longer having occasion for his services, J. B. raised a subscription among his friends at home, purchased the schoolhouse—a very neat building—and settled Jennings in it. The rest of his acts are they not written in the "Book of the Travels of J. B. and G. H. W?"[1]

[1] "Narrative of a Voyage to South Africa and the Mauritius." By James Backhouse.

I am very busy gardening. This morning planted a large patch with tomato-plants, from which we hope to have many a meal—"chops and tomato-sauce." We have not yet been able to procure a gardener—even a common labouring man—to dig our ground, though we have been sending after them ever since my arrival.

I have not yet begun to *botanise*—having no horse, and fifteen shillings is too much to pay every time I want to pick up some weeds. I rise with the sun, and the time till breakfast is consumed either watering or planting in the garden. So are my evenings spent, and ten o'clock finds me ready for bed. I am in perfect health and *equal spirits*—that is level—neither up nor down—a plain—but not a *flat*. I hope to get letters by the Wellington next week.

The following letters evince Mr. Harvey's freedom from sectarian bias, and may serve to show how, with that same innate love of truth which, from boyhood, he had held of such importance in an investigation of the mysteries and wonders of the natural kingdom, he now sought to discriminate between truth and falsehood, as regarded the laws of Christ's kingdom upon earth, and examined into the doctrines of the Church of which he eventually became so faithful a member and so able an advocate.

To a Cousin.

Cape Town, March 25, 1841.

In reading "Wilberforce's Correspondence" to-day—a book that contains many good-for-nothing letters, but several of an opposite character—I was so much pleased with a passage that occurs in one from Alexander Knox, the friend of Bishop Jebb, that, as I cannot have the pleasure of reading it to you, I will e'en transcribe, as I think it will find an answering chord in your mind as it does in mine. The whole letter is interesting, but here is what I allude to:—

"We cannot but persuade ourselves that the growing dissonances in religion (which, in point of fact, are undeniable), and the increasing cries of 'Lo! Christ is here,' and, 'Lo! Christ is there,' will at length dispose the truly upright of heart to pant after some more settled order of things than recent times have exemplified. The jar of words, and the conflict of parties,

will evince the necessity of some certain rallying point, where an effectual stand may be made against the presumption of novices and the wiles of the deceitful. If such a post of safety be not discoverable, how are the contests of the religious world to terminate? My friend (Dr. Jebb) and I think that it is to be found in the written Word of God—not as interpreted for himself by each ignorant or self-conceited individual—but as illustrated by the converging rays of those who have been successively lights in their generations. 'The opinions,' says Vincentius, 'are to be collected of those Fathers alone who, with holiness, wisdom, and constancy, living, teaching, and persevering in the Catholic faith and communion, have enjoyed the privilege of dying in Christ faithfully, and of dying for Christ happily. It seems to us, that to trace out this concurrence is in reality to recur to God's work for elucidation of His Word.' Such persons as Vincentius describes, were what they were, through the operation of the Divine Spirit; the virtues in which they excelled were the fruit of that Spirit, and the concordant principles by which that fruit was nourished and matured, could be no other than rills and rivulets of that river which proceedeth from the throne of God and of the Lamb. What, then, is the unbroken agreement of results and principles in this most interesting retrospect but, in a sober sense, the witness of the Divine Spirit to His own truth? If, therefore, it has in any instance pleased that blessed Spirit to speak obscurely, can we do more wisely than to examine how the same adorable Agent has wrought, in order that the principles of heavenly chemistry, delivered in the written Word, may be explained by the practice of the all-wise Artist in the laboratory of His Church? Thus we conceive unity of sentiment on the very matters that now divide Christians to be rationally and luminously attainable, and it is our persuasion that it will be attained, for our Saviour's prayer cannot always remain unanswered. Sooner or later Christians will be one, that the world may believe, and perfected in one, that the world may know."

There is much in this that I like, especially the spirit in which it concludes—the calm fixed hope, quietly resting on the very nature of Christianity; its confidence that a time of peace and unity will yet dawn on the Church, and all the anti-

christian squabbles that have so long disgraced the name of religion will cease—that "all may be one." I think the times are drawing on, and they may be nearer than the present appearance of the world warrants our supposing, when something like what Knox looks for—at least its dawning—will arise on the world. His letter is written in 1818, and has not the world made rapid steps since then? If we could see clearly through the multitude of irrelevant matters that surround us, I *hope* we should find that it has. But it seems as if it were a law of Providence, that great changes, such as this would be, proceed by little and little, so as to be hardly perceptibly advanced up to a certain fixed time, and that then they blaze forth with an unexpected light. If we look back at the advances which the human race have made in anything, whether in religion or civil liberty, or even in science, we are struck with the *jumps* mankind appear to make at certain epochs of their career; but I fancy the *jump* is much more in appearance than in reality. A truer simile would be found in the attraction that takes place between the several drops of water oozing through a bed of sand, beneath which they find at first a comfortable bed and reservoir, till drop after drop gradually added from the neighbouring beds, at length the stream finds its exit in the shape of a vigorous spring. To any one ignorant of the long previous process, the appearance of the spring would seem sudden and miraculous, whilst it was merely the result of the regular course of Nature. Now, I think with the writer, that the present state of the Christian world is like the gathering in of the drops. They are coming in and tending to one centre of attraction; but unfortunately there are inequalities in the ground, and the consequence is, the formation of separate reservoirs, resting, indeed, on the same Rock, but divided by dykes and ridges of greater or less size. Let the waters but rise till they prevail over these, and then we shall have once more the vigorous undivided stream. But into which of the present channels shall it flow? That is a question I am by no means clear about. I was strongly inclined, like our worthy friend the Doctor, to mingle my drop in the stream of the English Church, and yet the more closely I look at it the *less* inclined do I feel to take any such step. Not but what I think she is a very good Lady, and one that stands very high indeed in the

ranks, but I cannot go so far as to consider her the Lady *par excellence*—the very centre to which all things tend; and, therefore, I do not deem it expedient to go out of my way on her account. There are some things which I cannot at all swallow, and chiefly, the *Apostolical* succession; namely, the traditional deduction of the Holy Spirit by the laying on of hands from the early days, through the dark ages down to the present time. I know it is easily enough made out that there is a long line of popes, and that through their ministration what is called a regular succession has descended to the English bishops. Now this would be all very well, and I would freely admit the validity of the claim if I could first find out that the popes *had* the apostolic spirit in their gift—"that on whomsoever they laid hands they should receive the Holy Ghost." But for the satisfying of my mind, at least, it is only necessary to look back at these "successors" of St. Peter to be assured that they had no such gifts themselves, and so could not give what they had not. It reminds one of the pleasant title the kings of England took as "Kings of France," when they had not an inch of ground in the country. Besides, what becomes even of the *historical* succession, when, for years before the Council of Constance, we have *three* popes living at once, busily employed in *cursing* each other—not a very spiritual Christian employment! But I must not run on further. I must write it to Dr. F. some day, and perhaps may rouse the lion. Just now I am hot on the subject, for I have been reading "Ranke's History of the Popes," and "George Fox's Journal!"—the *old* edition, that has all about witches, &c., in it, in which creatures he was a firm believer. From what I have read I am quite disposed to acquit him of having entertained Hicksite notions, as we understand them. I think he had clear ideas of a contrary nature, and there are plenty of passages to show it; but in many places the style is so extremely obscure and *mystical* that I am not sure that I understand him. This is particularly the case in some of his Epistles, especially in those addressed to "Friends in the Ministry." Besides, I think that his *enthusiasm*, of which it is vain to deny he had a large share, sometimes carried him *beyond* what, in these degenerate days, we should call "sound *reason*." I fear if he were to appear in our times, he would be thought "*touched*." I know we must make great allowance for

the age he lived in, when every one believed in witches, and so forth; and it is perhaps impossible to fix the exact *limits* between *zeal* and—I will not say insanity—but that species of *excited fervour* in which the judgment trembles on the tapering point of the imagination. While she can be *kept* there, the human mind is, I conceive, at about its highest elevation of "inspiration." But we may compare the poised judgment to the equally quivering needle—at least, we must allow the ease with which it is displaced, and inspiration yields to insanity. Witness J. Naylor. Fox was preserved from this, but there were times when he appeared to go fearfully near it. Other Friends, too, in those days, of whom Fox fully approved, did strange things; for instance, one who, for three years before the Restoration, went through towns and villages *naked*, "declaring the truth," as a sign that *they* should be stripped as he was. But enough of these things; this is the sum—my attachment to the peculiar characteristics of Quakerism is neither lessened nor increased by what I have yet read. I have but little *sectarian* attachment, and to most classes of Christians have no sectarian *aversion;* but I believe our duty, in the *present* age of the Church at least, will be to mind our own individual affairs, and to remain as free as possible from party feeling.

I have heard of —— frequently through H. H. T., and have often thought of —— through what, I fear, has been a winter of sorrow. After these repeated attacks of that insatiable disorder, to what can we look forward? It is vain to disguise the probability. "Friend after friend departs." If there were nothing to look forward to beyond the grave, it were a world for children only. For after the pleasant days of childhood are gone by, what is our life but one continuous series of losses, broken at short intervals by gleams of happiness—stronger, indeed, than those of childhood, but more rudely torn away, and leaving a deeper wound? Poor J——! But he has learned to know in whose hands his breath is, and that in the darkest hour of sorrow—if the lamp be kept burning—there is an altar where he may find rest. There is a text in Lamentations, on which I once heard a very beautiful Good Friday sermon, that often occurs to me—"Is it nothing to you, all ye that pass by? Behold, and see if there be any sorrow like unto my sorrow, which is done unto me, wherewith the Lord hath afflicted me in

the day of his fierce anger." In the sermon, the application was, of course, made to the sufferings of our Lord on the cross; but it is the language of every heart suffering under a keen bereavement. And is there no source of consolation in turning the mind from the individual sorrow to that far greater—that unspeakably great suffering and affliction which He must have felt *as a man* on whom was laid what as a *mere* man He never could have supported? To me, there is; and it seems the only satisfying refuge to which the harassed mind can turn and hide its grief in thoughts that insensibly raise it above its own individual sufferings. The hope of meeting hereafter is not of itself sufficient, for there is nothing to dwell on and to rest upon in the interim. It is at best but a dim shadow, scarcely differing from what one feels on looking at a picture. I have not much news; in fact, none. I pass a quieter and more monotonous life than ever. There is no object in walking at this season, for the country is withered. In a month more it will be blooming again, studded with the many-coloured *Oxalideæ*. *The child will then have its toys.*

Cape Town, September 11, 1841.

You make some allusion in your letter to the *still* unsettled state of your mind on the most important of all subjects. I am equally at sea. That is, I am undecided as to the *propriety* of joining absolutely with any body of Christians, the *propriety* only, for in the present state of the Christian church I do not think there is necessity laid upon its members to adhere absolutely to any variety of creed. I am inclined to fix the boundary of the Catholic church where Jeremy Taylor places it, in his "Liberty of Prophesying," namely with a reception of the Apostles' creed. As far as I am *myself* concerned, I heartily follow the Nicene formula, but I should hardly feel justified (were I called on to decide) in declaring the reception of every word of that creed an essential to the profession of Christianity. There are many Quakers, I apprehend, who would stumble at it, who yet may be very good Christians, and by no means Socinians. I remember when I felt shocked at the word "substance," without at all doubting the idea intended to be conveyed, and many Quakers, I am sure, from early prejudice, would feel a similar disinclination to receive it. My only

objection to the Athanasian is *the curse.* It may be so—the gates of heaven may have this bar—but it is not for mortal man to fix it. I cannot declare that every one who does not "so think" is cursed; notwithstanding there cannot be a question but that the whole substance of Christianity is contained in the right reception of the doctrine of the Trinity, for the simple reason, that without this doctrine there *can be* no atonement; yet there is to my mind something so like narrowing the mercy of the Almighty in that word "so," that I dare not take it into my mouth to pronounce it. Were it the exact language of inspiration it would be different, but it is only an inference deduced from Scripture, and it may partake of human weakness and error. Besides, it seems to me a going out of our way to judge "another's servant." Whilst I believe the main proposition of this *creed,* however, my "objection" to it would not keep me out of the Church, because it is one of her formulæ. My opinions as to the evil tendency, yea, and *origin* of "*dissent,*" are as strong as our worthy friend the Doctor could desire, and yet, strange to say, I cannot see my way clear to forsake the dissenting body among whom I was born. It would be a great saving of trouble if one had happened to be born within the pale of the "Church" (the latter word in Dr. F.'s interpretation), but I still think that our objections to the form of Christianity to which we have been accustomed since childhood, ought to be very definite indeed to warrant us in forsaking the way of our parents. We cannot doubt the genuineness of *their* religion; the inference is therefore, that though perhaps another way may be better, this is at least *good.* There are three degrees of comparison, say the grammarians, and while we are within the positive, there is at least safety. A time may come when it will be our duty to join with the "Church;" but I cannot yet think it is come, although my *affections* are perhaps more turned towards her than towards *any* body of dissenters. My reading of George Fox has therefore not *deepened* me much in Quakerism, and instead of pursuing the subject with Barclay, I have begun at *Hooker.* I have but just commenced with him; it is therefore premature to speak; but the more I consider the subject, the more I regret the loss in the Protestant world of the Catholic *idea,* that *idea* of unity, the loss of which has produced the swarm of *sects.* This loss appears to me to have originated

in an overweening spiritual pride, fostered unhappily by political causes, and it is no wonder that the fruit of such a parent stock should be confusion and rancour. How can I help feeling, on looking at this "swarm" of unquiet spirits, that there is one body of Christians (I speak not of her *members* as men, but of that which she is in *idea* and in her institutes) which has been wonderfully "kept from the hour of temptation which has come upon the world." I think the Book of Common Prayer, when we consider the time at which it was fixed—its first emerging from the dark cloud of apostacy at the end of Henry the Eighth's reign, and its completion in the dissolute age of Charles the Second—is one of the most wonderful productions, I can hardly say of human appointment, for I cannot but think that as, in the beginning, "the Spirit of God moved on the face of the waters." Its inspiration may not indeed be compared to that of Scripture, but ought it not to hold the second place? Instead, therefore, of complaining that it is a relic of Popery, and crying out for changes here and there, my only wonder is that it has so completely escaped contamination. It may be that "the smell of the fire" has here and there remained on the garment; but it does not amount to a stain or a hole, and holy indeed ought to be the hands that would alter it. But I am no *Puseyite*, as the saying is; I see no reason why we should worship antiquity, or believe that the first three or four centuries enjoyed more divine light than any that have succeeded them. My acquaintance with the "Fathers" is certainly very trifling, and what I have read has been in translation; but there are many of their notions and practices that would sound strangely dark in the present day, and which indeed cannot be defended either by reason or Scripture. And if mere *antiquity* is to carry the mind with it, at what age of the Church will you stop? You must at once swallow the Papacy. But surely it is only necessary to cast a very casual glance at the history of the world to perceive that neither in *science* nor in *religion*, nor yet in political freedom, has there been any steady progress. Discoveries, revelations, and institutions have indeed succeeded each other in bright succession, and *on the whole* there has been a progressive movement in the mind; but it has been by eras, by "avatars," by solitary individuals, or ideas standing suddenly out amid the surrounding darkness, brightening to a certain fixed point, and then diminish-

ing, till in another age or two the face of the world has relapsed, if not into its original darkness, into something far inferior to the light it had enjoyed. The rising of a tide will illustrate what I mean—wave after wave comes on, each running much beyond *the true level*, but each again retreating nearly to that level. One large wave may greatly outrun many that shall come after it, and yet those lesser swells may have a greater effect in raising the tide, because they retreat less.

To Mrs. L——.

Cape Town, October 3, 1841.

My dear S——,

If I could take credit for all the letters I have written in my head, either when roaming alone over the tops of Table Mountain, or when lying awake watching for the dawn, you would have a tolerably respectable budget to acknowledge; but, my dear, there is often a wide and impassable gulf fixed between our resolutions and our performance of them, and it is not always an easy matter to find the bridge across, and so it has been with me. On my arrival here, and for a long time afterwards, indeed until lately, I had begun to think that my right hand had forgotten its cunning, so dead did I feel to all my old purposes and occupations, almost to my affections; for though these latter were constantly stirring about, it was more like the bustle an autumn wind makes through a heap of withered leaves than that refreshing *rustle* which we hear among the young beech-leaves in spring. But I have in degree shaken off the black dog. What has lately tended to *lighten* me I cannot tell, unless it be that—

> "As birds begin
> By instinct in their cage to rise,
> When near their time for change of skies—"

I feel some presentiment as if my time in Africa would not be quite so long as I had anticipated when I last left home, and thus I am more at ease in my present allotment.

To a Cousin.

October 24, 1841.

I heartily give you joy that you have entered into that *rest* to which I hope yet to attain, if not in this world, yet in that

which is to come, a rest within the ark of Christ's holy Church; and yet I see little chance of my being outwardly admitted for years to come, perhaps not while I live. Nevertheless I agree with the Church of which you are now a member in every essential point, and disagree with the "people," to whom nominally I still belong, on every point but one, and that is the unlawfulness and immoral tendency of oaths. In other respects, I am *almost* but *not quite* a member of what you call "the Church." I give the term a wider sweep, for I include within "the Church" all of every sect who receive the Athanasian creed, which I hold to contain the three great ideas *within* which there is ever Christianity, *without* which no Christianity can exist. I think I have high "authority for this view, not only Athanasius himself, but my much-regarded friend, the venerable Hooker, the author of "Laws of Church Polity," a book which the more I know the more I admire. But as yet I am not prepared to go the full length with him. You, being a woman, were won to the Church by simple love. You loved much, and therefore you liked without examination what you did not understand, and this was a very proper proceeding on your part. You were fully persuaded in your mind, and that is the main point. But I require to be convinced of the ins and outs of all the *theory* of Church belief, before I consent to believe her. I must put my finger into the print of the nails, and thrust my hand into her side before I join her as you have done, notwithstanding the blessing that rests on those who believe in simplicity. Unless I be *fully persuaded* of a thing, it is useless for me to pretend to believe it by yielding an assent, and therefore I am disposed to wait "till the day dawn, and the dayspring descend from on high." In so waiting, I hope I am not resting an unsafe reliance on a full reception of the *doctrine* which the Church believes. Her *articles* and certain others of her pretensions appear to me unscriptural; but, like you, I love every syllable of her divine Liturgy, some of the state services excepted. However, as I said before, the time is not yet come that I can join with her. My reasons for not doing so are entirely unconnected with any temporal convenience, for if I thought the time had really arrived, I hope I should be granted strength to enter her fold to-morrow and dare the issue. But a letter cannot convey all I feel on the subject.

CHAPTER VII.

COLLEGE APPOINTMENT.

When Mr. Harvey returned in 1840, to resume his official duties at Cape Town, after his leave of absence and continental tours, though apparently restored to his accustomed health, his susceptibility to the influence of the African climate had not been overcome, and towards the close of the year 1841 he had a renewal of his former illness, which obliged him finally to abandon all idea of any further residence in a climate for which he was evidently so unfitted. In the spring of 1842 he once more arrived in London, where, after submitting for some weeks to medical treatment and care, he felt well enough to enjoy the society of a few of his friends, and also to take a short excursion in the Isle of Wight, previous to leaving for Ireland.

The reader will no doubt readily enter into the feelings arising from blighted prospects, and the frustration of long-cherished hopes, under which the following letters were written.

To a Cousin.

London, April 17, 1842.

"Pity the sorrows of a poor old man!" that is weary of the routine life which he is forced to lead here. I have been performing a sort of quarantine for the last two months, but have no just reason at their conclusion for any other feeling than one of gratitude to our Heavenly Father for having restored the tottering frame-work of my nerves.

If the doctors would now consent to my going home, it would be all that I want to bring me round to the full measure of usual health. I am weary of having nothing to engage my mind, or keep me from falling back into listlessness or ennui. I struggle against it as best I can, but find it often very difficult. Since I have seen a few of my friends, I get on better, and letters are some little food; but unless you keep up a supply of this penny post chat, a stray letter is soon put aside, and I roll back on my hinges like a creaking door. I have very few books, nor do I employ much time in regular reading.

Sir William Hooker has been very ill—I fear alarmingly so—but is now much better. I had a note from him on Friday; I fear it will be some days before I am allowed to go to see him. Poor old Menzies died of apoplexy in February last. I just missed seeing him; he had reached his ninetieth birthday, but his spirit was so bright and active that his death seems like that of a much younger contemporary.

To N. B. Ward, Esq.

Ventnor, Isle of Wight, May 18, 1842.

You may well be surprised that I have hopped away here unknown to you, but it was a sudden thought, and I had no time after decision to call and tell you I was going.

Dr. F. and I left town on the 11th, and got to Newport yesterday, after seeing the wonders of Carisbrook Castle. . . . We are rather disappointed in this said Ventnor. It is a pretty little place—quiet and cool, with a view of the Channel, but there are very few sea-side walks, and no strand. As for Algæ, they are seemingly none but the commonest; some may lie hid that escape a stroller's casual glance. I should soon get tired of the sameness of this place, so very different from our own fine shores on the West of Ireland.

The soil of the hills is chalky, and they are beginning to turn brown in anticipation of summer. There is but little water in the Chines or gullies that form the chief lions of the place. On the whole, we think they make quite enough of the beauties and fetrility of this "Garden of England." The rage for building has already spoiled some of the prettiest nooks.

Directly on returning to Ireland Mr. Harvey sought the bracing air and retirement of his favourite Miltown Malbay, which gradually restored his strength, though his complete recovery was slow, retarded as it was by the feelings naturally arising from being without the prospect of a settled occupation. These are touchingly dwelt on in a letter to his dear friend and relative Dr. F., who had been much with him during his illness.

Cream Point, Miltown Malbay,
July 7, 1842.

My dear Thomas,

I have several times since we parted commenced writing to you, and then allowed the dulness of the hour to conquer, and committed the paper to the grate; but now that I have a note from you, I must at least let you know I am above ground, and, for all I see, likely to be so for some time longer. But for the rest, I have been troubled with alternate fits of wretchedness and apathy, with few glimpses of anything like a healthy resignation to the will of God, so that the less I tell of my spiritual state the better for those that hear me.

I am obliged for the beautiful extracts from Wilberforce's sermon, which I have read twice, and shall again refer to. There is indeed a voice of awful warning in the first part which comes close to the conscience. Would that I could apply to myself the consolatory part with equal sense of its fitness; but I am conscious at present of so much deadness, and insensibility to reproof, and to severe chastisement, that I cannot yet see in my own case "All things working together for good." The hour of cloud and doubt is on me. I endeavour (but not as unremittingly as I ought) to silence rebellious feeling, but I too often turn to any trifle in my way to hide myself from the bitterness of my own thoughts. Like the ostrich hiding its head in the sand from its pursuers, this only gives temporary relief. This is the cause of my not having written to you, and of my being thus deprived of the consolation which your experience might afford me; yet hoping for a change within, I wait from day to day. If I can compare myself to any of the states presented to us in Scripture, it would be to him who hid his lord's money, and from whom the talent was taken away to be given to a more profitable servant. There is still left me, how-

ever, a responsibility; and as much comparative guilt attaches to the neglect of small as of large mercies.

The remainder of 1842 and 1843 were passed by Mr. Harvey without any settled employment, except as he found interest in his favourite botanical pursuits. The August of 1843 was spent with his sister's family at Wicklow, from whence he writes, "My time passes here in a very idle manner, *pebble*-hunting with H. and the children, of all other occupations the least profitable, for the pleasure, so far as I am concerned, consists in the search, as I do not care for the treasures once they are found and admired. I found the *Vicia sylvatica* in the Devil's Glen, but no ripe pods. Did you care to see the account of Captain Ross? I hope soon to hear of their arrival in England. How anxiously Lady H. must be counting the days after all the anxiety and sorrow she has gone through since she parted with her son four years ago!"

Writing about the same time to his friend Mr. Ward, he says, "I have been spending the last two months and a half on the shores of the county of Wicklow very pleasantly, but not, botanically speaking, very profitably, as I scarcely found a single Alga I had not gathered ten years ago. Of pebbles, agates of various colours, I gathered a tolerable store. There is a pebbly strand some five or six miles long, and in the very hot weather we spent nearly the whole day upon it, lounging about and looking after pebbles. Some of them are very beautiful, but rarely of any great size. The seaweeds are few and only occasionally thrown up, and there are no shells."

Having once more taken up his residence at Plassey, he writes in October to one of his friends, "Yesterday I commenced at the office, and will henceforth be a regular attendant thereof. It is pleasant to have regular occupation again after such a long spell of idleness, and it has the wonderfully good effect of making me get up early—not to be in time for breakfast, but to look to my plants or to amuse myself in other ways."

Writing to a relative in November to whom he was sending Jeremy Taylor's "Select Sermons" and "Liberty of Prophesying," together with the "Autobiography of Archbishop Laud," he says: "The two first are good books, the latter little book we will

not say whether good or bad, but if you have imbibed the idea that Laud was everything bad and shocking, perhaps it may serve to plead a little in his favour. I fear our worthy Dr. F——r thinks Jeremy dreadfully "low church," and so he is undoubtedly in his "Liberty," wherein the definition of Catholicity is very Catholic indeed. When I read him I was greatly pleased therewith; but as I have perhaps altered a little in sentiment since that time, I don't know how I may like him when I next dip into him."

At the close of this year, the prospect of being appointed to a situation then vacant in Trinity College, Dublin, unexpectedly opened. His feelings at this important crisis in his life may be well understood as depicted both in his gay and grave manner in the following letters:—

To Miss F——.

Plassey, December 1843.

As I know you dearly love a secret, I am going to tell you one which is no secret at all to many persons who are engaged in forwarding it, but it is not talked of to those who have nothing to say to it, and who cannot do anything to forward it. Now you are clearly one of the latter, and only one of the former in common with my other well-wishers.

By this you will learn that the matter affects myself. I have made a proposal, and I am taken under consideration. You may have observed that when I was last in C——, I attended church, and further, that in this note I drop the "tu-toi" which I have been in the practice of using to my immediate friends. By these symptoms you may infer that the Lady in question is not "one of you as a people," but of the right sort, one of the established church called Holy Catholic, and in this conjecture you are strictly correct. She is of that persuasion, and moreover, she is not *over* young, but she has *money*, and this you know will smooth many a wrinkle, and colour with carmine the yellowest cheek. But money is not her sole charm in my eyes. The respectability of the connection, and her being addicted to Botany, are what have peculiarly won my affections, and made me enter the lists of her admirers. To conclude this long preface, she resides in Dublin, which will be very pleasant. She has a *good house* of her own in College

Green, with plenty of accommodation for lodgers, and indeed at one time she was in the habit of taking in boarders (very respectable young men, attendants on College), in which line she has made some money, though her principal income is now derived from estates in various parts of Ireland, which she has come into by inheritance. They were granted, I hear, in the reign of Queen Elizabeth, being indeed old church property.

Her name is ——. But that would be telling.

To the Same.

December 11, 1843.

So you were fairly quizzed—well 'twas not kind, but let that pass. A number of contradictory reports are afloat about the lady in Dublin, and as yet I am uncertain what is to be my fate. If it were to depend on all the good wishes and flattering certificates I have got from my English friends, among the highly learned of the day, we might hope it would go well, but as it doth not, and these are only pieces of paper in the eyes of the Dubliners, we are yet in doubt. After all, it is only an old bachelor's place—merely monastic, but into such a one I am ready to fall.

To J. Fennell, Esq.

December 14.

I have been canvassing for a post which is vacant in Trinity College, Dublin, namely, Professor of Botany and Curator of the Herbarium, a combined office, to which a moderate salary and comfortable College-rooms are attached. It is an old bachelor place, and would in many ways suit me very well. The only thing on the face of it disagreeable is the *lecturing*, but I don't think I should mind that much, as it is lawful to have the subjects for the class written down, and the pointing at diagrams and exhibiting specimens, with which lecturers vary their talk, would take away from the continuity of speaking, which might otherwise be unpleasant. The election takes place 26th of March. I have been beating about among my friends for testimonials, and have got a great many, some of them so ridiculously flattering that I don't know myself by the description, which reminds me of the difficulty of finding out some plants by their

written characters, at least until the specimens are *dried properly*. There is much in the drying process to elicit hidden characters.

To Miss F——l.

February 18, 1844.

I have just been ordered up to Dublin, for which I start to-morrow morning, for the purpose of being made a doctor! on Tuesday next at two o'clock, to enable me to hold the professorship, which is to be combined with the curatorship, both to be decided 26th March, on which day it is thought *Dr. Harvey* will be the happy man.

March 20th. To-day I was made a doctor in fine style. I hired a cap and gown for the occasion. I have seen several members of the board, who assure me I may judge of their good wishes by what they have done to-day. I was admitted, tell J——, as a Quaker, and had to stand up while all the rest were kneeling,—but I made a sad mistake in reading the form, for once I said "*Juro*" in mistake for "*Affirmo*." The Lord Primate, uncle to the Marquis of Waterford, conferred the degree, which he did in a very worthy manner. He is a very noble-looking person. An archbishop every inch. I am to dine with the provost this evening.

March 30th. I was this day married to the old lady, who gives me an annual sum for pin-money, with a suite of rooms, and agrees to pay a sum of money if she should ever be forced to divorce me. I am quite pleased with those terms. I shall not be settled before the middle of May, as I go to spend the honeymoon in Limerick.

The arrangement thus humorously alluded to, as being quite satisfactory, was nevertheless not exactly that which Dr. Harvey had at first expected. It was contended that the honorary degree of M.D., which had been conferred on him by the University, did not qualify him to hold the Professorship, and, after much debate, it was ultimately decided to separate the two offices, Dr. Harvey being appointed Curator of the Herbarium, while Dr. Allman was elected to the Botanical Chair. In 1856, Dr. Allman obtained the Professorship of Natural History in the University of Edinburgh, and Dr. Harvey succeeded him, without any opposition, in the Botanical Chair of Dublin.

Dr. Harvey's college life, now fairly begun, appears to have exactly satisfied his tastes and wishes. Living much with his sister, occupied with his favourite pursuits, and mixing in congenial society, he devoted himself to its duties with all his accustomed ardour and industry. June 17th of this year, he says:—"I am as busy as a bee these times, and now steal an hour of the night to write this hurried note. I rise at five A.M., or before it, and work till breakfast-time (half-past eight) at the 'Antarctic Algæ.' Directly after breakfast I start for the College, and do not leave it till five o'clock in the evening. Again at plants till dusk. I am writing on the 'Antarctic Algæ,' and arranging the Herbarium, and have been working at Coulter's Mexican and Californian plants. I have free range of the Library, to go there and poke into any hole and corner I like. The books are not lent out, however, but I chiefly go to consult illustrated works, and that can be done very well there. To-day I had a Latin letter from Pesth, in Hungary, beginning 'Spectabilis et Doctissime Domine.' Were I an alderman what more could he say?"

About the same time he writes to another relative:—"I am glad you are pleased with Leighton,[1] as I was last winter. I read the first volume every night before going to bed when I had a fire in my room, but I have been put out by coming here (to T. C. D.), and my readings have fallen into arrear. On Sundays I have been reading Magee's great book.[2] Pity it has so little arrangement, is so much 'at random strung.' However, it is indeed a great work, and the style is beautiful, lucidly clear, and the controversial part bitingly severe, without deviating in the least from the dignity of a Christian author."

The college vacation of 1844, like many future ones, was spent by Dr. Harvey chiefly at Kew. A visit to his friends there was always a time of the highest enjoyment. He writes, August 20th:—"I came here on the 10th August, and have been a fixture ever since. Except an occasional day in London, I have been but little beyond the garden and lawn, only a few times at the Botanical Gardens, nearly a mile distant. My time has been spent partly in arranging Sir William's unsettled bundles, and partly in selecting duplicates for the College

[1] Archbishop Leighton's Commentary on 1st Epistle of St. Peter.
[2] On the Atonement.

Herbarium. Of these latter my pickings fill two large deal cases and one large hamper. The latter is filled with dried fruits. Last Sunday I spent with Dr. F——r, at Banstead. The country is very pretty; no village worth the name, only a few scattered houses, an inn, and a church at some short distance through the fields. Banstead lies on the chalk, which you know is always hilly, with fine short grass 'cropped by nibbling sheep.' There are woods, and hedgerows, and scattered houses, an extensive prospect over flatter country, a common, and 'downs,' and those downs are just now ornamented with thousands of purple blossoms of *Cnicus acaulis*, a common English plant, though not found in Ireland. It has no stem, but a bright purple thistle blossom sits on the ground in the middle of a star of leaves. I picked up specimens for drying. The Doctor and I took a pleasant walk after morning-service to Chipstead, and so on to Woodmanstem, where we arrived in time for evening song, or *vespers* I should say—a nice little church, Puseyite I suppose it would be called, as it has a painted window and an ornamented altar-cloth. We are to spend next Sunday together in town, and go to hear Mr. Maurice.

"The only *great* man I have seen in London is Mr. Rogers, the poet. He is feeble on his feet, and looks like a walking corpse, but otherwise does not seem the worse for the wear. We met him at the Chiswick Gardens, and Sir William had a long chat with him, while I stood listening. The old man told funny stories of this and that distinguished person. A lady, that I afterwards heard was Queen Adelaide, drove past, but I did not look at her.

"Two plants of *Fourcroya gigantea* are now coming into blossom at Kew. They look like the American *agave* lifted on a trunk or stem. About three weeks ago both plants started flower-stalks, which grew at first at the rate of two feet, and now grow one foot per diem. The stalk at first was as thick as a man's thigh, and looked like a giant head of *Asparagus*. It is now twenty-seven feet high, and pushes out into the open air through the roof of the greenhouse. It is still growing, and may grow three or four feet farther. The side branches are coming, and when in flower there will be a large number of greenish-yellow blossoms. It is feared the plant may die with the exertion of blossoming. Next week the

foundations of the new grand stove are to be laid. It will be 66 feet high, 100 feet wide, and 340 feet long! the largest in England, and consequently in the world, unless the Winter Palace have a larger, which I doubt. The contract for the work has been taken by an Irishman.

"I have got a new and extraordinary *net-work* Alga from New Holland, still more elaborate in structure than the *Claudea*. It is composed of jointed filaments resembling those of a *Callithamnion*, woven together into a regular *net* with hexagonal meshes. This net forms leaves, having a mid-rib and pinnated riblets or veins running through it, and the leaves are like oak-leaves in form, so that the whole looks like the skeleton of an oak-leaf. Its name is *Thuretia quercifolia*. There is a net-work at both surfaces of the leaves, the rib-work forming the central part. All is quite open like lace. Unfortunately the French are before us in finding it, and we must adopt their name; but that is a trifle. My specimen was picked up by a lady who accidentally landed for a few hours in a little harbour, into which the ship put during a gale, and she describes the shore as being covered with the most wonderful profusion of plants and animals. She got all the pocket handkerchiefs of the party and filled them with what came first to hand, and in this hasty way picked up sixty different kinds of sponges, forty of which are new species, and several Algæ, among which was the above described beauty. Her husband (a captain) is going out again, and promises to gather all he can meet with. Don't I hope he may have a run in again in a squall!"

His vacation tour is sketched as follows, in a letter to his friend, the late Mr. W. Thompson,[1] of Belfast :—

Limerick, September 19, 1844.

I have just returned from England, having spent six weeks at Kew and nearly two at Torquay. I have since been in Cork and Cahir, and go to Kilkee from this, before settling down to work quietly for the winter, when I shall not be sorry to have done with rambling for a season. I have added to the Herbarium of T.C.D. between 3000 and 4000 species, contributed by Sir William Hooker from his duplicates.

I was delighted to find Mrs. Griffiths looking remarkably

[1] Author of the "Natural History of Ireland."

well, and apparently not older than when I saw her five years ago. Her last birthday was seventy-six. We went out boating, and picking Algæ together; and she took me to the habitat of *Teedii*, six miles distant, where she had discovered this rare plant the year in which I was born. The habitat is only a few yards square, and it has never been found growing anywhere else in England. I was fortunate in gathering a few branches, which made up afterwards into twenty or thirty specimens. I return your plants named, and am,

My dear Thompson,
Yours always.

To Miss F——l.

December 12, 1844.

As far as appears, the odd-looking thing that you found on your dahlia stems is the *Sclerotium varium*, a sort of fungus; but I have sent specimens to Mr. Berkeley, the highest authority in such matters, and so if it prove to be anything grander, you shall know in time. You could not do better than take to gathering old sticks, and rotten straws and leaves, on which a new world of vegetables find subsistence. Many of them are highly beautiful and curious, and you will be very likely to find *new* species. Now is the time. This is the summer of fungi.

"Agarics and fungi with mildew and mould,
Started like mist from the wet ground cold," &c.

To N. B. Ward, Esq.

Trinity College, January 18th, 1845.

When your welcome letter arrived, I was wandering in the County of Tipperary, and since my return have not had many hours, or even moments, in which I could write a letter. I spent Christmas at Plassey, and was absent in all about three weeks. The task on which I am at present busy is not a very interesting one, nor does it add much to my knowledge. My days are spent in laying down on the papers specimens to be glued by a woman, who is constantly so employed in the next room. We have been more than a month at *Compositæ*. Till this most necessary work is completed, I have no time to examine the large collections of unnamed plants under my care.

April 9th. I am going on busily with the Herbarium. At night I arrange ferns for the glue-woman; before breakfast I work at Algæ, and give the day to other plants, so that I have sufficient variety to keep me from wearying.

June 28th. You may well believe how much I was shocked at seeing in the papers the account of poor Griffith's untimely death. It is indeed a loss to science, such as we cannot hope to see ever filled up. So much talent, such zeal and energy gone, just as they were beginning to attract universal attention, and to raise his name to the first rank among botanists. He was unquestionably the *Brown* of India. I hope the India Company may put his papers and plants in competent hands for publication. There must be materials for a noble monument; and he was himself so careful of the posthumous fame of others, that his own ought not to be neglected.

College breaks up in ten days, and I am going to fix myself for the first part of the holidays on the shores of Dingle Bay, where I hope to find many interesting plants, and to reap a good harvest of Algæ.

August 13th. On Brandon Mountain, this morning, I had the pleasure of gathering for the first time *Jungermannia woodsia;* and as I think you may possibly like to cultivate it, I enclose a specimen, which I hope may survive. Its position on the mountain is extremely local, confined, so far as I could observe, to a single short ledge near the summit, having a deep precipice on one side. There, however, it is plentiful, quite covering the rock with its brown cushions.

I have now been a month in Kerry, but have found few plants of interest. Mr. Whitla, of Belfast, is with me. I wish you were also. *Eriocaulon* is in several of the lakes here. The coast but bad for Algæ. However, at Valencia I gathered *Nitophyllum Hilliæ, growing* on rocks, which was a good *find.* Mrs. Griffiths has only got it thrown up. Having little in the sea, I took to the fields, and have been learning the names of a few agarics with the help of Berkeley's well-written volume; but I am often wishing for a figure to refer to, there are so many shades of difference in a genus of 350 species, and some of these mere shadows, little evident without ocular demonstration.

To the Same.

Roche's Hotel, Killarney, August 23, 1845.

I am glad my birthday offering from Brandon was acceptable to you, and hope it may grow. The aspect of the ledge (3000 and odd feet above the sea) is north-east, quite exposed to solar influence, but much encompassed with wet mists and showers all the year round, and its quantum of snow in winter is probably small, as the mountain rises nearly on the seashore. You might put him in your Tintern Abbey case, I should think.

I now enclose *Hook. læte-virens,* from O'Sullivan's cascade. It will grow under the *Trichomanes* in a case; moisture, shade, and warmth required. You write for roots of *Trichomanes,* and, if in my power, you shall have them. I say "if in my power," for I have not yet been to its habitat, and know not in what abundance or scarcity it may be now. If very scarce, I shall grudge to pull it. If it can be removed without rooting out the plant altogether, you shall have it. We visited Andrew's habitat a few days ago, but I abstained from gathering a single frond or touching a root, because it had recently been so shamefully bemauled by "a botanical pirate," a robbery which it will take many years to recover. The plant just exists, and no more. You know there are sundry stations in the County of Cork from which probably the London dealer has supplied himself. Our best chance is to find a new one here. In the old I fear there is but little.

I was greatly struck with the beauty of one of the varieties of *Asp. dilatatum* in the woods here, and mean to send you a plant of it by the next steamer. When well grown and large, it equals in beauty almost any exotic fern of its dimensions that I know. It has jet-black stems, pale-green and curly, or *concave* foliage, and, at a little distance, is like a gigantic *Trichomanes.* It grows in pine-woods, in dryish situations. Would you were here, indeed! Mind this—whenever you go to Killarney, you must call on me to act as guide. You would luxuriate in the growth of all things here.

Ever yours,
W. H. H.

Killarney, Feast of St. Bartholomew.

I am delighted to enclose you a good root of the *Trichomanes*, of which I found more than I expected, but not any in fruit. I have put six fronds to dry, of which you shall have three. It is now very scarce compared to what it formerly was. I took away three-fourths of what I found, which was leaving but just enough to the station. I felt the less compunction as I knew all the roots I had taken would be well cared for.

To the Same.

Trinity College, June 3, 1846.

June has at length brought about the long hot days when citizens take refuge in the country; and it urges me to write to you again, begging that you will reconsider your determination adopted in the cold weather, when you were incapable of forming a correct judgment in the matter. I still hope you may be persuaded to come to Ireland. I write thus timely that you may not have the excuse of being taken unawares. I cannot leave Dublin before the 8th July, when College breaks up, but instantly afterwards I am your man to go to any part of Ireland you have a fancy for. Young Rutherford, who is at school at Kensington, is coming over, and will be my only companion if you do not come. Do not fear the Repealers or the "Peep-o'-Day" boys; we may travel the length and breadth of the land and see none of them. As neither of us are land-agents, tithe-proctors, nor gaugers, they will not trouble us.

Mackay has for some time back had a fine plant of *Filix fœmina* keeping for you, but I always tell him when he asks me how it is to be sent, "Mr. Ward is coming over himself, and will take charge of it." Come and prove my words true.

The summer has opened with glorious weather; everything looks beautiful—everything but the hot town and the dusty roads. If we cannot promise you nightingales you shall have thousands of larks "weary of rest" to enliven you. You NEVER saw dashing *waves* or *sea-cliffs*, for you have not seen those of our West. The very memory of them is refreshing amid the heat. I want to show you the "Cliffs of Moher," which will put Shakspeare's Cliff out of your mind for tallness; and I promise

that you shall gather such *Aspl. marinum* as you never have seen, even in dreams—so long, so darkly green.

I am sure Mrs. Ward will join me in urging you to come, as she knows how much you want a mouthful of sea-breezes, and how greatly you would enjoy as well as benefit physically from such a trip. Surely you *can* get away if you only try. I remember your once saying that when you were fifty you would go to the West Indies. Meantime come thus far on your route. If we cannot give you palm-groves we must make it up in Arbutus.

I propose Causeway, Londonderry, down west coast to Connemara, Clare, Limerick, Killarney, Cork, where you take shipping for Plymouth, Torquay, Southampton, London, all in a month or six weeks. My kind regards to Mrs. Ward, who will stand my friend, I trust, in the present matter.

Ever yours.

To the Same.

Yacht Charm, off Cantire, June, 6, 1846.

Here I am, very much to my own surprise, and probably as much to yours. The day before yesterday, at two o'clock P.M., a friend called on me and offered me a trip in his yacht to the Western Islands, Shetlands, and possibly Iceland or Norway, weather permitting, if I could be ready to start at six that evening. I had much to do; first to prepare the July copy of the "Phycologia," then to ask liberty from the Board, then to pack up. The offer was so tempting that I made the push. We sailed at seven that evening, and here we are now going in for a Western pilot. From this we go through the sound of Islay and push on northward, landing at such of the Western Islands as we take a fancy to, and hope ere long to see John O'Groat and the Ultima Thule beyond him.

Have I not used you most abominably after my letter written but a day or two ago? But the chances of your coming were so slender, and the opportunity one that might never offer again, that I thought "the tide in my affairs should be taken at the flood."

To Mr. Ball, when off Islay, he writes:—"I ran away last Thursday on three hours' notice, and had no time to tell you or scarcely any one else; and 'where I am going I cannot imagine,' but woe am I that 'in my hand' I do not 'carry a broom.' We are

grievously grieved that we have no dredge. A sudden offer from T. P. to take me in his yacht to the Hebrides, Orkneys, and *perhaps* Iceland or Norway, induced me to fling everything to the winds, and to go to the Provost and his compeers to ask leave to lift anchor. They kindly granted it, and here I am."

To N. B. Ward, Esq.

Charm, off Caithness, June 18.

Alack-a-day! my nobles have come to ninepence, and instead of a three months' cruise, embracing Iceland and the Shetlands, we are now on our homeward course, having merely "marked off" the Hebrides and Orkneys. In so hurried a trip I have had few opportunities of botanising, indeed have been but little on shore. We go down the east coast of Scotland, and intend to take the yacht through the Leith Canal to the Clyde, then probably to stand over to the Giant's Causeway, where I mean to land, and hope to reach Dublin by June 30th. As my northern tour is frustrated, I shall then be quite open to the projected Irish tour, and need not repeat what pleasure it will give me if you make party with me in it.

We have seen no newspaper, and have had no letters for the last fortnight, and know not how the world goes on.

To the Same.

Upper Abbey, Cahir, August 6, 1846.

I hope you have really benefited by your Irish tour, which was rather too much hurried. Next time we shall not attempt so much, but shall settle down snugly in some pleasant corner. I left Cork on Saturday, and go to Limerick to-day. From thence I shall probably go to Roundstone for a fortnight; then to Dublin; and about the middle of September, cross over to London.

I hope your ferns are likely to grow, and that the "Erin-go-Bragh" case will be settled before I get over.

I have just got a letter from Scouler, who is in Portugal, amid daily insurrections, which he little minds, but takes his daily walks, Vasculum in hand, and meets civility everywhere. He was at Oporto, where the country is quite burned up, and was just about to start for the interior, where he hoped to get up the mountains.

To Dr. Robert Ball.

Roundstone, August 22.

Yesterday, dredging, we found a new genus of Algæ—*new* to Britain, namely, *Peysonellia*, a Mediterranean thing, in fine fruit, a new species (*P. borealis, Harv.*) but having all the generic characters quite perfect. By the way, I expect you often saw it on old oyster shells, but passed it by as a dirt-pie. A flourish of trumpets about it, nevertheless, for it is really interesting. Dredged on the scallop bed Birterbuy Bay. I intend to leave this for Dublin this-day-week. Hope to see you on Monday following: lots of pretty things—good—but not much variety. Dredged *Tellina squamula.*

October 24th. I have been very busy since my return from Roundstone, at lithography every day, and sorting Mexican plants every night. I must draw forty-eight plates for Reeve between this and Christmas, which will keep me pretty busy.

Writing to Mr. Ward on the 18th of December he enclosed what he calls some Irish cobwebs, playfully remarking on the *fragrance* of the peat smoke "acquired from their parentage in an Irish cabin." The letter proceeds, "They were knit by poor women in their own houses in the village of Stradbally, Queen's County, the art having been taught them by a sister of Dr. F—— r, who lives there, and who, by the earnings thus obtained, has materially improved the condition of a large number of families of the miserably poor. She has not, however, yet succeeded in curing the cabins of peat smoke, nor has she introduced Ward's cases amongst them.

"Hard times these, all through this wretched country. I don't think the newspaper accounts are magnified. No statement can well be worse than the truth. Many in the west have perished with cold and hunger; the evil is so gigantic that it is impossible to meet it fully."

During this disastrous winter Mrs. Leadbeater's benevolent exertions for the relief of the poor proved too much for her delicate frame. While going amongst the sick, conducting a soup-kitchen, and trying by every means in her power to keep famine at bay, she heedlessly exposed herself to the severity of a bitter frost, and caught a cold, which terminated in bronchitis,

of which she died on Christmas Day. From the childhood of her younger cousin she had been his confidante, and, herself a writer of poetry, she was also the depositary of all his effusions. They were warmly attached to each other. Mrs. Leadbeater was lovely in person, in mind, and in heart, and was long and deeply lamented.

In a letter to another relative Dr. Harvey says, "I can hardly realize to myself what has occurred, it seems so very sudden. The Doctor and I had long settled to spend our Christmas with her, and now our next meeting will be beside her grave. I have been thinking much this evening of her own beautiful lines—

> 'Oh could I choose my time to die,
> It should be ere the hour
> That age had dimmed my youthful eye,
> And gone was youthful power;
> With lingering step may I depart,
> That ere my latest breath,
> I may have learned from all to part,
> And calmly meet thee, Death.'

You know the lines well. The first part of her wish has been granted, and I trust the second also, though we know not now, and may never know it till we shall meet 'at the end of the days,' should we be strengthened 'to stand in our lot' in that awful assembly. We have lost another member from our little circle; it ought to be another cord loosened, another step advanced on our own journey. Would that it were truly so!"

Though the year 1847 must appear little more than a blank in these pages, it was by no means an idle one with Dr. Harvey. The drawing and describing for his "Phycologia Britannica," in addition to his College work, so fully occupied him as to afford little leisure for any correspondence beyond the letters connected with his labours, or such scientific ones as are not within the scope of the present memoir. The following, however, to his friend Mr. Thompson, seems well suited for insertion here, as marking the candour which was so prominent a feature in both characters. It undoubtedly has reference to the "Phycologia," to which Mr. T. had contributed many of the *habitats*.

To Wm. Thompson, Esq.

Trinity College, Dublin,
January 19, 1847.

Heartless THOMPSON,

'Tis dangerous to joke on paper, for a thing looks so different in writing from what it would sound if spoken—the manner being all in all. I was *half* joking in my note, and so were you, I suppose, in yours; but I confess I was only *half*, for I did feel a little nettled.

"Oh wad some Power the giftie gie us
To see ourselves as others see us."

I should then have written with more caution. I am really obliged to you for telling me that my book has been said to have the character you mention, for I by no means wish it to be a mere glorification of the said person, or indeed of any person else, myself not excepted. If I lean to glorify any one, it is Mrs. Griffiths, to whom I owe much of the little acquaintance I have with the *variations* to which these plants are subject, and who has often saved me from making bad species, and who is always ready to supply me with fruit of plants which every one else finds barren. She is worth ten thousand other collectors; and I don't care a whit if you say (or if all the world join you) that my book is merely a trumpet for her praises. For she is a *trump.*

Never mind "gilding your pills." It is wasting refined gold. I like you all the better for telling me exactly what you think, and where I am wrong, and when I am convinced of my error, I hope I shall always try and mend it. I confess that the early numbers were very deficient in information, such as you say is wished for. You and Forbes wrote to me about it, and I have since done my best to mend. I always latterly give the habitats when I know them, and what can I say more? I am forced to restrain myself within the two pages. These are enough for most plants, but to-day I have had some February proofs returned to me to be cut down, being much too long. The last few numbers have been much more carefully written, and I intend to keep it up. Whether you see any improvement or not, I cannot say, but I know I take more pains to please.

Ever yours,

HARVEYA—*Cordata.*

To N. B. Ward, Esq.

Trinity College, Dublin.
January 15, 1848.

I had hoped to be on my way to London to-day, but have remained here to canvass for the Professorship of Botany to the Royal Dublin Society, the obtaining of which would connect me with the beautiful garden at Glasnevin. I never entered on a personal canvass before, and am heartily sick of it. At first I rather felt amused, seeing a number of different characters, and being treated like a gentleman in one house, like a troublesome fellow in another, and like a needy beggar in a third. Nine-tenths of the persons called upon were ignorant of my having any claims to support, and some of them favoured me with lectures on what a botanist ought to know; others told me they would vote for their friend, who, they supposed, was as good as another, and very many had given pledges to vote for a candidate wholly unknown to them, "to oblige a friend." Now and then I met a *refreshing* man who talked rationally on the matter, and though he did not promise his vote, said he would give it on the day of election to the candidate who appeared most eligible. Such men I always left with pleasure, as vanity whispered that I should bag them in the end. I have met with great kindness from several who are strangers personally, but who are guided by what they know of me as a botanist. Some of these have greatly assisted me in canvassing, and thus I trust the foundations of friendship are laid between us, unless my failing as a lecturer should disappoint them.

The account of your Scotch tour interested me much. It must have vastly added to the pleasure of going through such a country to have for a companion one who saw with a painter's eye and a poet's mind. I should have been glad had it suited me to have gone with you.

January 27th. Happy to say I have just been elected Professor to the Royal Dublin Society, by a large majority. I must now try not to disappoint the favourable impression spread abroad, for I have been returned by three-fourths, personally strangers. It was a scene of great excitement—500 present.

Yours ever,

W. H.—*Glasnevin.*

To the Same.

Trinity College, Dublin,
March 29, 1848.

I heartily congratulate you on your removal from the smoke of London to the pure air of the country, and I much like Clapham Rise. The common is one of the prettiest about London, though many are pretty. No man will enjoy the change more than you, and none can deserve enjoyment better. You have worked a good day's work for others, and now richly deserve the Sabbath's rest which you are looking forward to. God grant you a long lease of it! I look forward with much pleasure to the promised walks on Clapham Common, and thank you for the promise of a "prophet's chamber," which it will give me great pleasure to occupy one of these days. It is a most convenient distance from the Kew terminus. I know the ground, having been there last summer to visit Mr. Pollexfen. He must be one of your near neighbours, and you ought to know him, for he is a most agreeable man, and an ardent botanist. You are sure to be friends.

You have not told me the fate of the fernery at the square, whether it is to be intrusted to Mr. S——, or to follow you to Clapham. At least the *Irish* case must be removed. It would be a pity to disturb the old ones, as they are *classical;* and besides, however suitable to their present position, would be hardly smart enough for the new quarters. Well, if you grow your plants as successfully in good air as you did in the smoke, we shall not grumble. But, after all, I have somehow a sort of affection (like a cat) for that old house, and should not like to see it stripped and bare. I hope the baby roses may still flourish in its window-sills, and the cactuses continue to swing on their wires. You will have so many new pets in the country that those will not be missed, and, as an experiment, they can never be so well placed as where they are. I hope you have a nice sunny bank under your window, and that you will have a flaming bed of *escholtzia* in memory of our dear old friend. I never see that plant without its bringing the hale old man vividly before me.

I was rather amused (pardon) at your complaint of *want of room* for horticultural experiments at your country residence.

I should have thought it would have been easy to have got a garden *at least as large* as that at the Square ; and for my own enjoyment I think a *small garden* infinitely to be preferred to a large one. A small suburban garden, full of varieties and botanical oddities, like Dr. Neill's, at Edinburgh, is the one which (unless I had a large fortune) I should expect most pleasure from, and such I trust you have got.

In the spring of 1849 Dr. Harvey received an invitation to deliver a course of lectures at the Lowell Institute of Cambridge (Boston). The opportunity thus afforded of visiting North America, and of being introduced to many of the eminent scientific and literary men of that country, was gladly embraced, and the prospect extended to a botanical exploration of various parts of the coast. Added to this was the pleasure of becoming personally acquainted with the widow and daughters of his brother Jacob, whose death had taken place in the preceding year. He had married a daughter of the late Dr. Hosack, of Hyde Park, on the Hudson, and had acquired a distinguished place among the merchants of New York. As a citizen he took an active and intelligent interest in public affairs, and especially in the international questions frequently in agitation between England and America; his great and constant desire being to prevent any collision between the two countries. His joyous humour, warmth, and kindness of heart, and his refined hospitality, endeared him to a wide circle of friends. He was ever ready to exercise his services on behalf of his poor emigrant countrymen. The respect and esteem with which Mr. Jacob Harvey had been regarded paved the way for a warm and friendly reception of his brother in many circles throughout the Union.

The course of lectures delivered by Dr. Harvey comprehended the subjects proposed in the following letters to Dr. Asa Gray, of Cambridge, Massachusetts.

Trinity College, Dublin, April 11, 1849.

My dear Friend,

I have to thank you for your very kind lettter and the warmly hospitable invitation which it contained to your house, during my stay at Boston. It will give me very great pleasure

to see as much of you as I can, and for *part* of the time I hope to accept your kindness; but you have already advertised me of a place for seaweed-picking near Boston, and I am anxious to explore it if I can find accommodation on the coast. There are so few rocky sea-bathing places in the Union, that this one has the more attraction.

Taking a hint from your wish for lectures on Algæ, I have thought of a subject which is the least hackneyed, or threadbare, that occurs to me. It is to trace the *progressive organisation* of the vegetable entity,—through the imperfect to the perfect plants, as follows:—

Lecture 1. The subject proposed, introductory observations, &c.
„ 2. Elementary forms of Veg. Diatomaceæ and Desmidiaceæ.
„ 3. Algæ of the green series.
„ 4. Algæ of the red series.
„ 5. Algæ of the olive series.
„ 6. Lichens.
„ 7. Mosses.
„ 8. Hepaticæ and Equisetaceæ, Lycopodiaceæ, &c.
„ 9. True ferns—Polypodiaceæ.
„ 10. Fungi (the most aristocratic of Crypts! "fruges consumere Nati!")
„ 11. Endogens and Exogens. Merely in outline to complete the group.
„ 12. General résumé, showing the advance of organisation, the recurrence of types, &c., and conclusion. A poetical lecture!

You may be surprised at the *order* in which I place the *Cryptogamia*, but I have my reasons, and you must wait for them if you wish to know them.

I shall have to make fifty or sixty new diagrams (a work I do myself); but it is rather pleasant if I have time.

Thank you for your very elaborate paper, though I have no time to look at it. I am lecturing now three days in the week, and making diagrams and writing *copy* for printers, occupy the rest of my time.

Most truly yours.

To N. B. Ward, Esq.

Trinity College, June 30, 1849.

My fingers have latterly been very busy, now with ink and now with colours, and they will have no rest till I get among the green leaves of the Western world. Even the days at sea have their allotted work in preparing *stuff* (an excellent word) for the printers. The greater part of the new edition of the "Manual" is in type, and I expect to prepare, index, &c., on the voyage, and to finish off the letterpress of "Phycologia" for the time that I shall be absent.

At present I do not contemplate bringing any additional guest to meet your party on July the 11th, unless I can persuade my friend F. W. Burton (the painter) to accompany me. I hope we shall travel to London together, and I am sure you will like him if he can come.

You will be glad to hear that Mackay has been made an LL.D. by our university.

CHAPTER VIII.

TOUR IN THE UNITED STATES.

Dr. Harvey sailed from Liverpool in the Europa, to Halifax, where he landed on the 24th of July, 1849, after a fair passage of ten days, and was warmly welcomed by his old Cape friend Mr. E., with whom he took up his quarters during the few days of his stay, which were chiefly spent in exploring the neighbouring country and in dredging for seaweeds.

He describes the shores of Nova Scotia, as seen from the deck of the steamer, to be not unlike some bleak parts of the north of Scotland, save that instead of the Scotch fir, the hills are clothed with the dark conical spruce. "Such wooding," he says, "has a very sombre appearance, and, in cold weather, must be the quintessence of bleakness. The shore itself much indented, with rocks and islands scattered about." His journal-letter thus proceeds:—

"The harbour of Halifax itself, though there is nothing grand in the scenery about it, has much beauty, besides being, as you know, one of the most capacious and secure in the world. There is a long entrance from the sea; a narrow bay, bordered by spruce-clad hills, and at the far end you see the town, standing on a projecting tongue of land. None of this is the harbour *proper*, which lies behind the town, completely sheltered from storm, while the approach, owing to the form of ground, may be strengthened to any extent, and has been strongly fortified. There is an island a little way down in the middle, a sort of Spike Island, placed exactly in the spot for a *position* (of defence). The town lies along the shore on a succession of hills, and is overlooked by a large and strong citadel crowning the highest hill. It is built entirely of wood, and has

a wonderfully primitive appearance; the houses small, poor-looking, and standing apart one from another—a prudent way of building wooden houses in case of fire, and I suppose ground-rent is probably not large. Even in the streets the houses thus stand with yards between; but I have not seen the fashionable quarter as yet, and so as we should not judge of Dublin by the neighbourhood of Sir John's Quay, perhaps that of the dockyard of Halifax is no fair sample of this colonial city.

"If I can secure the services of a handy boatman who knows the ground, I hope to do well at the dredging. The long deep quiet bays look well for weeds, and ought also to yield *beasts*. As we steamed up I could see that the water is full of medusæ, but I leave such soft creatures for others to investigate. I find that a botanist whom I expected to meet here, lives some fifty miles off, at Cape Breton. This morning has opened with dense fog, but I think it will end in heat. The climate here strikingly reminds me of that of Zermatt (at four thousand feet elevation), strong sun and brilliant sky alternating with cold and fog in a few hours.

"Yesterday forenoon I started on my first ramble. Proceeding through the best part of the town to the country beyond it, I found the streets certainly wider and the houses better than at the other end, but much the same in character; nearly all of wood, wooden churches with wooden spires, only here and there a stone house. On the whole, a queer-looking primitive place, extending a mile or two along the bay.

"Getting beyond the houses, I pursued my walk along the shore road, and was attracted over a wall by a pretty little *Potentilla* growing in a grass-field. I plucked him carefully, but soon found I had gathered the commonest plant in the country, for no sooner had I got a few rods farther, where industry failed and unkempt Nature began, than I found my friend everywhere, and often almost the only green thing (at this time) among the brown. My next acquisition was equally common, but yet a very pretty little shrub—*Kalmia glauca*, which here grows everywhere through the woods and in half-cleared patches, mixed with two kinds of gale, junipers, whortleberries, *Sedum palustre, Andromeda, Empetrum*, and several other small evergreens. The *Kalmia* was still partially in bloom, the others all gone to fruit. Next came a wild rose

(*Rosa caroliniana*), very common but very lovely, petals which might stand sample as "rose colour," shining leaves and glandular calices. So I wandered along, now keeping the road, now starting into the wood, and again going down to the shore, and admiring the half-seen view with rolling fog banks, and so on to Point Pleasant, where the road turns back to Halifax through an upper level. Going into the woods, I *marked* off a bright green snake, too lovely for me to hunt, and so putting thoughts of museum out of mind, I let him alone. He was very small, and green as a leek. Next I saw a toad, and these are at present my experiences of North American reptiles. No troublesome insects nor flies. A few butterflies about, also loud-screaming grasshoppers, and here and there a chirp of a bird. Saw birds called *robins*, the size and look of thrushes, with black heads, and (I am told) red breasts: did not see the breasts, the wood being dark. The wood carpeted with soft moss, and several pretty *Alpine* plants, among which *Linnæa Borealis* (Linnæus's plant) was very conspicuous a few weeks ago, but is now nearly out of flower. I mean to enclose seeds of a little beauty, *Houstonia repens* if I remember rightly, which will delight E. F.; twin flowers having but one cup, at the end of trailing stems, the flowers succeeded by red berries. The woods themselves like an uncared-for plantation—trees of all ages, but none large; several kinds of pines, spruces, *P. Canadensis*, larch, and farther from shore than the others, Weymouth pines, handsome when young, but, as with us, soon getting scraggy—a wilderness of them very picturesque. The look-out from Point Pleasant really beautiful. A long arm of the sea stretches inward, at intervals cottages scattered through the woods on cleared spots, a church here and there, a little pier with a small vessel, loading boats, &c. Pine-clad hills beyond. In the evening E—— and I walked out in the opposite direction to see Bedford Basin, another noble land-locked harbour, large enough for a whole navy, and lying in a state of nature. Saw a wigwam in the distance—three huts, like those of gipsies.

31*st*. Out all yesterday in a boat and caught very little. A poor variety of sea-plants here. Actually I snapped at a piece of common *dillisk*, which came up in the dredge, with the furore of a starving Connaught man, because its red colour was

some relief to the invariable dingy olive of the kelp. We rarely took anything but huge seaweeds, different from those of our shores, and so far interesting. I have had a visit from the Roman Catholic bishop (Walsh), with whom E. and I dine on Thursday, and on Saturday we dine with another party, and this will finish the visiting, I hope. I was at church on Sunday, and heard a sermon from the Bishop of Nova Scotia on the lesson of the day, namely, the Prophet who came to speak against the altar at Bethel. Nothing very new in his lordship's exposition except that he pronounced Jeroboam Jer-*o*-boam. Tell —— so, but don't tell him that I went in the evening to the free kirk with E., and heard a very good sermon and some very bad singing. We drove on Saturday about twelve miles inland, skirting the shores of the inner harbour, called Bedford Basin, for nine miles, and then going up the Sackville river to a wayside inn, where we dined on roast lamb, potatoes, peas, salad, ices, beer, cheese, raspberries and cream, batter-pudding, biscuits and brandy, and home by moonlight. The drive very pretty, but like the dredging, not much variety. I gathered a few plants, walked in woods, forded streams, strolled through the long grass of marshy meadows, and saw snakes. Passed some very picturesque pines that looked almost like cedars. I think they must be "hemlocks" (again I regret I have no book at hand for reference), mixed with Weymouths and spruces and American larch (called juniper). They say that wherever a pine-grove is cut down, hard wood (birch, maple, alder, &c.) springs up, and vice versâ. They say also that there are no *nettles* in the colony, but I found plenty, and pointed them out to E. Whether one saying be more true than another I cannot tell. I should get tired of this place before long unless I had regular occupation.

The only interesting plants here are the bog-plants, and most of these are out of flower. If you don't know *Sarracenia* (here called the Indian cup), ask Bain to show you the *caricature* of it grown in the gardens. Here, in the mossy bogs, it is much more beautiful with its clusters of graceful pitchers, green, or red, or streaked, or mottled, sitting half sunk in soft moss. I have sent Mackay some roots of it viâ Kew. In the bogs grow also two very handsome orchideæ with large lilac flowers, and crimson beards on their long lower lip. I sent bulbs of one of

them with the *Sarracenia*. I never admired yellow water-lilies till I saw them here; perhaps it is for want of something better, but really the golden flowers are not ugly, and I persuade myself they must be a different species from ours. I found also the sweet-scented white water-lily, but poor and small, owing to the drying up of the water-ponds. The bog is only just moist; the sun still powerful, and no rain comes.

August 2nd. Yesterday I walked round by Point Pleasant, the scene of my first day's ramble, and admired the views afresh, and enjoyed the aroma of the spruce-woods; but I gathered no new plants, so I came home and sketched out the heads of a lecture, and then read Macaulay till dinner-time. To-day I hope to go on the water.

New York, August 12th. "Well, sir, what do you think of our city?" the question I am asked daily by every new face, and which I at present decline to answer to the new faces, pleading the privilege of a stranger. I may tell you, however, some first impressions. 'Tis like twenty Birkenheads and a dozen Liverpools, with slices from London and Paris, all huddled together, and painted bright red, with green windows. Wide, dirty streets, where everything may be thrown, and where it lies — the cleansing operation being performed by chloride of lime, which salutes your nostrils as you pass along; —badly paved and rough; no two houses of the same size and form consecutively—a rambling city, extending for miles beyond the end of the continuous houses. Busy streets in the older part, well-built stores full of goods, and plenty of busy mankind about them. Huge shops in Broadway, built of white marble, and very spacious within. Huge quack medicine stores, and grand houses of quack-doctors; some handsome churches, and many funny-looking ones. The public buildings handsome enough. On the whole, a great heap of houses, noises, and smells, and 300,000 or 400,000 people. The whole passage up the bay very beautiful; richly wooded hills with villas and villages, and a fine expanse of water. I have yet had no good view of the country around, and but a distant peep of the shores of the Hudson. The view which I have seen from a height of New York is a waste of red brick, with spires at intervals, and nothing very particular in the distance. The fashion with the wealthy here is to build very grand houses; and there are many which look

more like palaces than anything else—built of cut stone, standing apart, plate-glass windows and everything grand. Quack-doctors, oilmen, and milkmen, dwell in such. Every newer man tries to outdo the last. One man built a fine palace of a house. "Come," said his opposite neighbour, "I guess my *stable* will be superior to your house." So he builds a cut stone stable right opposite to his friend's door, much grander looking than the grand house of his friend. Some of these houses cost 80,000 to 120,000 dollars. Our voyage from Halifax took about fifty-two hours: calm weather, and pleasant enough.

August 17th, Longbranch, N.J. What of Longbranch? Very good for bathing, and a very good place for children, there being a strand and fields to root in; and a good place for old gentlemen, there being a verandah to smoke in; and a good place for ladies, there being a balcony to chat in; but no place for a botanist, for there is nothing on the shore but sand and water, and nothing in the fields but sand, and weeds that he does not want. There are some pretty drives in the neighbourhood, and I have been on two, leading into the country. Sandy roads, which we should call very deep and bad for horses—a sandy country, covered with wild cedar, hickory, several kinds of oak, chestnut, plantains, tulip-tree, poplars, &c.; farmhouses thickly scattered, fields of Indian-corn and potatoes, low hills, streams, marshes, and a river, and no mountains in the distance. Our yesterday's ride was to a distant farmhouse, famous as having been the country-house of the mothers of the two Barings. We live in a small boarding-house, very quiet, with an agreeable party. With books, one could pass time here very well in fine weather. At present it is not at all too hot—very delightful; and you must not be surprised if I fall in love with America, and settle down here. If we be driven out of Ireland by rebellion, it is pleasant to have this country under our lee. I have met nothing yet but what is agreeable; but doubtless there are two sides to the question. Poor medicine chest! I left it in New York *quietly*, and eat peaches and Indian-corn instead of physic. I leave this on the 20th for New York, and join our party in a few days at Hyde Park.

19th. Since I wrote the above we have had some pleasant drives through the woods, which have added to the agreability of the moment, but not contributed much to one's stock of

plants. Several of the oaks are very beautiful trees, with glossy broad leaves, much larger than *we* see on oaks; others have leaves so like chestnut, that, till you look very close, they seem like chestnut-trees. The hickory is like a walnut, with very large, dark-green leaves; and the black walnut has a mixed character, between walnut and ash. The underwood is sumach, already beginning to redden, *Clethra* very abundant and very sweet, wax-berry, bog-myrtle, *Comptonia*, and whortleberries without end; a few small flowers between—scarlet lobelia not the least handsome; fungi that make me regret the trouble of keeping them, &c. I have picked up *one* seaweed; nothing comes in except after easterly gales.

New York, August 28th. I arrived here to tea, and next morning set out with my friend Professor Bailey on an excursion to the eastern end of Long Island. We crossed the ferry at Brooklyn, entered the railway cars at half-past nine, and set out on a trip of ninety-four miles to Greenport, a distance accomplished in five hours. The road lies through a very level uninteresting country, the whole of Long Island being merely a high gravel bank covered with a thin soil; the grass at this season, after a long drought, too brown for beauty, and the trees of small size. Many cultivated spots near the New York end; then a long belt of low forest land, covered with varieties of oak and some pine. Then a space covered with a dwarf species of oak, which, even when fully grown, and loaded with acorns, is no bigger than a gooseberry-bush. Then there were extensive plains covered with grass, and patches of a small shrub (*Iva fruticans*), which indicate a saltness in the soil. The plains appeared to be several miles across, and must have a prairie aspect. Then we had more scrubby forests, and then a succession of ponds, covered with water-lilies, and a variety of pretty flowers, only seen from the railway car. Then swamps and salt-marshes; then arms of the sea running in, and finally Greenport itself. We passed through many "cities" and towns on the way, with fine names, some with large public buildings, and very long, very wide, and very straight streets, and even *squares* and *places;* but very few with *many* HOUSES. One street, called East New York, is laid out on a great scale; but there is only a house here and there, at the distance of several hundred yards. Greenport is thinly built in the same fashion, covering a large

space of ground. We put up at a comfortable country-inn—Peconic-house—kept by a very civil landlord, who, with his sons, waited on us at table. The house was pretty full—some forty or fifty at table—persons who have come down to get away from heat, or to bathe, or to fish, or to idle away time. Every day brought new faces, and took away old. I have not yet fallen in with the disagreeables of such places. Nothing could be more civil than the attendants; and the chambermaid, who evidently wondered much at my proceedings, nevertheless brought me water and dishes as I wanted them, and cheerfully too. The charges very moderate; six shillings (a dollar and a half) covered all the day's expenses, and nothing extra to servants, or expected by them. After three days of making *messes,* with water and seaweeds, I tendered the chambermaid half a dollar, which evidently highly impressed her with my liberality. We had a good day's dredging, and returned on Friday to New York. I was struck in the railway and at Greenport with the great majority of well-featured persons, as compared with our countrymen. There is a strong peculiarity in the American face; but the number of persons with *regular* features, both men and women, I think much greater than in England and Ireland. Handsome women at the table-d'hôtes in a large proportion. So far as I have seen, in America the outward animal is in a very well-developed state.

We drove one afternoon to see the Croton Aqueduct, about twelve miles distant. The stream of water is carried on arches ninety feet high, across the Haarlem River. There are fifteen arches; the water-tubes about three feet diameter. The drive, after passing the city, is beautiful, leading near the banks of the Hudson, of which there are constant peeps; wooded banks and scattered houses, weeping-willows and Lombardy-poplars plentifully introduced. There is, however, much neglect visible about the places along the road; ill-kept gardens and grounds; but then, to balance this, you have long shady avenues of trees. The streets appear to be laid out regularly (without houses) up to at least 130 Street, all with curbstones, and ready awaiting the settlers. We came home by the upper reservoir, which has a surface of over forty acres of water. The water is very pure and clear, and great pains are taken to keep it so; cautions warning you not to spit into it being stuck up very conspicuously.

The weather continues to be very pleasant; that is, about 80° in the house; mornings and evenings cool — nights not oppressive. I have felt nothing yet like a Cape hot day and night; but I suppose the severest heats are over. Stars not so bright as I had heard of, but with cooler weather they will get polished. The city *grows* considerably on me since my first report. Broadway, when lit up at night, is in several respects like Paris, from the splendidly fitted-up cafés, drinking-shops, and oyster-cellars, many of which pay 3000 dollars rent,—of great extent and very fine. I believe there is a great deal of the same dissipation here which Paris is famous for.

I have not yet seen either a mint-julep or a sherry-cobbler. The former, I find, is considered *vulgar* and *low;* the latter may be taken both by ladies and gentlemen. I make experiments in eating all the new vegetables I see at table. Some I find tolerable. They have a very nice bean, with a skin as thin as a film, and a good flavour. I think it the best of the experiments. The sweet-potatoes are like frost-bitten ones—mawkish. The squashes "not very nasty," and with seasoning may be rendered palatable. I have not yet witnessed a scramble for dinner, and a rush when the bell rings; but am told to expect one in the river steamers, and at the large places, and to be thankful if I get enough to eat at the table."

From New York, Dr. Harvey proceeded to join the family party at Hyde Park, stopping, however, at Westpoint for a few days with his friend Mr. Bailey, Professor of Botany in the Military Academy, with whom he had enjoyed the dredging excursion in Long Island, but whom he now found an invalid, only beginning to mend. "He would not let me away," he writes, "as soon as I should have come, though only able to talk to me from his bed, where he was lying weak and exhausted." Two of the days here were spent in examining and naming a collection of Algæ.

Like all other travellers, Dr. Harvey was charmed with the beautiful and varied scenery of "the noble Hudson River." Writing from Hyde Park, he describes in glowing words its successive beauties; its "precipitous wooded banks;" the singular barrier of rock, looking like gigantic palisades; the Highlands, where the river winds through wooded mountains, the

view changing at every turn—the projecting points so far concealing the view behind and before that one seems constantly sailing through small picturesque lakes, &c. The situation of the academy at Westpoint he describes as "exquisitely beautiful, and the surrounding scenery like the softest of Italian landscapes—the climate under which it was seen most splendid, cool, yet bright and sunny." The days of social enjoyment at Hyde Park were filled up with drives in its neighbourhood, and strolls through the lovely park scenery. "It is useless," he says, "to repeat that so and so is to be admired, unless I could place it bodily on paper. I have done nothing at botany since I came here, the flowers being mostly out of season, and I do not walk out much in the woods. There is plenty of *Lobelia cardinalis* in the marshy spots, and also a blue Lobelia, and a number of composite plants. Golden Rod (*Solidago*) takes the place of our ragweed in the fields. The most troublesome weeds are importations from Europe; the yellow toad-flax (*Linaria vul.*), which overruns every pasture, and tall, woolly mulleins (*Verbascum*), which spring up where they can, along roads and through fields. The ox-eyed daisy is also a pest here. The leaves have not yet begun to change; but I am told that in a week or two we shall have autumnal colours. We were at church on Sunday, where the service was more satisfactorily performed than I have yet witnessed in America. They have a habit here of mutilating the prayers—much being left to the discretion of the reader, who often omits large portions. The nice old man to-day (Dr. Sherwood) gave us the Litany without deductions, so that it felt more like home. They have, however, altered some of the quaintnesses of the old language by way of improvement, but I think very unhappily—putting "those" for *them*, even in the Lord's prayer. Several other such unimportant changes grate harshly on the ear. But these are trifles. All the prayers were read at the altar, and the lessons and sermon from a desk standing within the chancel rails. There was a communion, of which considerably more than half the congregation partook—the rest keeping their seats all the time, and the sacrament was administered to each *separately*, not to whole *railfuls* at once, as would have been the case in England. On the whole, the service was what one could wish to see always,

but does not always meet. The sermon was a brief exhortation without a text, on the last question in the Church Catechism, delivered in plain, simple, and earnest language. The church is a pretty little Gothic structure, built in very good taste, and situated close outside the park wall; both it and the parsonage embowered in trees.

Early in September, Dr. Harvey left Hyde Park to visit the Falls of Niagara. Writing from Troy, he again expresses his admiration of the Hudson. "Having now," he says, "traversed it for 152 miles, 145 of which it is navigable for large vessels, I pronounce it the noblest stream for picturesque and uninterrupted beauty, without any sameness, that I have ever seen. The three days of my route have had three separate characters, and had I made the transit in ten days instead of three, each would have had its own feature. Almost all the trees are still in their summer green, but here and there a maple among the green oaks stands out in clear pinky crimsons and carnations, with colours as vivid as those of Berlin wool. How glorious it will be in a fortnight or three weeks when I hope to be returning down the river."

"Troy," he proceeds, "is a large, well-built, and apparently thriving town. One of the first signs we saw was Priam's stores. In my evening walk I saw three large, well-filled, well-selected booksellers' shops—better than Limerick would furnish. I bought Lyell's new travels to read on the road. The Yankees are great readers. The city is beautifully situated on the Hudson, with Mount *Ida* and Mount *Olympus* rising immediately behind it. Troy is a great place for iron-casting, and there are numerous large furnaces and smoking chimneys.

"*September 13th.* I rose at five this morning and started for a walk to the summit of Mount Ida. Passing through a field where was a woman milking a cow, I asked her, was this Mount Ida? No, this was not. Which was it then? She was going to point, and then begged my pardon, and said she thought it was Mount 'Limpus I wanted. I said "No, Mount Ida;" whereon she pointed to a slightly higher hill, on which was a small house with Attic portico—a favourite embellishment in these parts. There was no view after all, dense mist rising from the country on the one side, and dense smoke on the other. Boots at the hotel is an Irishman from Mullingar, and we fraternised in

everything except Repeal, which I could not persuade him was a bad thing, nor could I make him think it was right for Irish gold to go to England and be spent there. He had been here but two years, and had learned to spit and to guess. I had a walk through the market, bought three peaches, halfpenny each, saw hampers full of cucumbers and tomatoes, some very large egg-plant fruit, sweet potatoes and other foreign-looking things. At half-past eight started by rail for Utica, and arrived there about two o'clock P.M. Seventy-eight miles—cost 11*s.* 6*d.* The road goes along the valley of the Mohawk, through charming scenery, of which the railway can give but a very confined view. Utica is a well-built, handsome town, with a good hotel. I took a car for 10*s.* 6*d.*, which brought me here (Trenton) and landed me at a snug little inn in the heart of the woods and close to the waterfall. The road here was delightful as to views, but very ill kept as to surface: a part laid with planks; very smooth, like so much wooden pavement, then came sand, and then rough, unbroken stones and ruts. Part was through genuine forest, full of tall old trees of various kinds, many dead and dying; hemlock-pines in all stages of decay, standing, leaning, and fallen—all huddled together in picturesque fashion. Notwithstanding the badness of the road, I greatly enjoyed the drive through the trees, having the advantage of the slanting light of afternoon shining brightly through the leaves, which here and there showed symptoms of red and yellow. I got here about five o'clock, and finding that supper was not till half-past seven, I set out to explore the Falls. We entered a grove, found a path conducting to a very steep flight of steps, descended then down another, till at last we safely landed on the rocky bed of the Mohawk, and heard the sound of a distant unseen fall. Here the river has forced its way between two nearly perpendicular walls of limestone, some 200 feet high, covered with hanging woods of the most beautiful variety of trees. Some huge lignum vitæ, as big as our tallest larches, particularly delighted me. Moreover the hemlocks were very picturesque. Perhaps Sir W. Scott's description of the retreat of Balfour of Burley will give you the best idea of this singular spot. If you knew the approach to Pfeffer's baths in Switzerland I should quote it. I had also a memory of the Birks of Aberfeldie. The path goes on by ledges, assisted here and

there by wooden ladders, and conducts you to the first, second, and third falls, the middle being the grandest and most picturesque. When the river is full, the din and foam must be magnificent. The rock is a decaying limestone in thin slate-like strata, and full of petrifactions; the strata remarkably horizontal. I picked up some fresh-water shells in the stream, very fine *Physa*. The woods are full of pretty aster, golden-rods, grass of Parnassus, &c. At supper we had deliciously pure, well flavoured, very white honey, and a great variety of cakes, on which I made my dinner. I had had, in the middle of the day, a cup of coffee and queen cake, and a slice of cold custard-pudding, which, with my tea, had supported me since breakfast-time. I did not care to stop at Utica for dinner, and it was all over when I got here. The custom of the country is to have stated hours at which all eat, and if you arrive late, you wait. I have not yet seen any rapid eating, and have always had plenty of time. The stories about spitting were either much exaggerated, or the practice is going out. I see and hear it now and then, but less than I expected. I was rather annoyed on the railroad to-day by the man behind me leaning on the back of my seat and occasionally bringing his elbow between my shoulders, merely from fidgeting, and with seeming unwillingness. Having now been seventeen hours *energising*, I shall say good-night, and go to bed. I am quite well and gaily."

Niagara Falls, September 16th, 1849.
Sunday evening.

I was glad to get off from Trenton yesterday, by a country stage which brought me to Utica, in time to catch the train for Buffalo—a large port for shipping on Lake Erie at the terminus of the Erie Canal. The many towns which we passed on our route, almost all looking fresh, and several large and flourishing, had a precious jumble of names: Rome, Verona, Chittenango, and Syracuse, Camillus, Auburn (famous for the State prison), Aurelius, Cayuga, Waterloo, Rochester, Geneva, Vienna, Canandagua, Fredonia, Victor, New Chili, Byron, &c., &c., and any other route in the neighbourhood would be as rich. Lake Erie is exactly like the sea, with a pebbly beach and waves breaking on it, an expanse of dark-blue clear water, and no land in sight at the opposite side. The illusion was strengthened

by two large vessels under full sail—studding sails set—looking very lovely, and a number of fishing-smacks with white square sails. I had no time to go down to the shore, as we left Buffalo at nine, and arrived here at half-past ten—twenty-two miles.

So here we are at last at Niagara, and I am sitting by candle-light this blessed Sunday evening, up three pair of stairs in a huge hotel, my window looking out on the Rapids, and the sound of many waters close underneath, with the bright stars aloft, but, alas! no moon. If there was I should probably not be here writing.

Immediately on my arrival I strolled out without being plagued by either guides or beggars, to find my way alone to what was to be seen. It was a brilliant, warm September day, and just the proper time to go to church; but though I observed two buildings with steeples thereon, I did not stop to inquire what was the doctrine taught within them, but turned towards a bridge leading to Goat Island, in the belief that I should probably find another sort of a church there which might be as profitable and more agreeable at the moment.

Directly I was crossing the Rapids above the Falls, which are like those of Doonass,[1] spread over a surface, perhaps more than a hundred times as great—that is to say—here is a broad river, with water clear as crystal, tumbling and dashing over rocks on a gradual descent of more than a mile, perhaps two or three from the point where it flows smoothly, till it finds an end in the precipitous leap of the Falls. As yet no Falls were visible, but their position was indicated by a cloud of spray, and their proximity by a steady sound.

Goat Island in mid-channel is as large, at the least, as our Innisfallen, and is beautifully wooded with a variety of trees, amongst which are large *lignum vitæ*. These are the *conical fir*-trees which you see in views of Niagara, and tossed about as they are —aslant, or half-rooted up, and some with dead tops or boughs, —they are very striking. I quickly found a path to the right, leading through the woods in the direction of the Falls. These, however, were still out of sight, till at length you turn a corner, when at once you get a full view of the *American* Fall.

Such was my first introduction; and it has all the charm to

[1] On the Shannon.

me of first impressions, and these were what I cannot describe. How any one could be disappointed in Niagara is to me amazing. I have no such powers of imagination as to expect a more magnificent sight in this world—greater majesty combined with nobler beauty. I am upwards of eight-and-thirty, and therefore in some respects obtuse, yet I was moved to tears. and I sat long without a desire to see beyond this first view, though aware that I was not at one of the grandest points. But fortunately I had no guide to *bother* me, which was the next best thing to having some one to sympathise with me. No picture can give a just impression, and certainly no description. To convey, then, something of that inexpressible feeling which brought tears, I must have recourse to the poetical descriptions of St. John, where he speaks of having heard "the voice of a great multitude, *and as the voice of many waters*, and as the voice of mighty thunderings, saying, Alleluia! for the Lord God Omnipotent reigneth!" It was that combination of majesty with power, and with a sense of continuance that so impressed me. That this glorious scene should have been going on day and night for thousands of years was a startling thought, and it brought up so many other thoughts of things—"the same yesterday, to-day, and for ever"—and so many others besides followed, that I do not know where my mind had wandered to before I thought of stirring. The enormous volume of water brought before me what a huge breaker like those at Miltown would be, if the sea ever rose so high as the cliffs at Kilkee and then toppled over. On the Canada side, where the river is deeper, this is still more striking, for the crest of the Fall is a full emerald green, as clear as glass, and the water, as it falls, foams gradually, till at last it rushes down, and is then lost in the white smoke-like spray which is continually rising. This spray appears at first like a white shifting cloud, but watching it, you distinctly see the jet upwards, and have, in one view, the plunge of the heavy waters into the abyss, the upward feathers from below, and the misty diffusion of the light particles in the air. I was reminded of the Devil's Tablecloth on Table Mountain, which is perpetually rolling down, and then, as it were, dissolving into spray. I often thought it looked like a waterfall, and now I find a waterfall like it. Rainbows, of course, are seen at different hours in great variety

and splendour, with colours as vivid as those of Turner's pictures, or of the *real* sky.

I came home at midday to dine, and then went back and stayed on the same ground till sunset. I chose to call this second visit going to evening service. To-morrow I shall have more to see, so will adjourn, being now ready for bed, as I was up so early.

To Mrs. Harvey, Hyde Park, he writes next day as follows:—"On my return from my first walk yesterday, I was delighted to find your most welcome letter lying on the table, as grateful as a new-laid egg after the six weeks of Lent.

"What do I think of Niagara? Well, it is a short question, and may be shortly answered, for if I attempt a long reply I should perhaps get puzzled, and you would get *bored:* so as the Queen of Sheba said when she came, and saw, and heard all the wisdom of Solomon, "Behold the half was not told me;" and like her, too, "There was no spirit left in me." It is the *one* thing I have seen worthy of the vastness of this continent. To speak of any other waterfall in the same breath with Niagara is absurd. Some one told me that I should prefer Trenton. There are a hundred falls as beautiful as Trenton, but where will you find another Niagara? Find me first another Shakspeare.

"I reached the Falls about half-past ten on Sunday morning, and proceeded at once to Goat Island, where I spent the whole day, with the exception of coming home to dinner. Don't tell Mr. S— that I preferred the voice of the cataract to one of his sermons. It was indeed a noble anthem, and brought vividly to mind some of those fine passages from Handel, in the choruses, taken from the Revelation, when a great multitude, that no man can number, are introduced. I never heard the Messiah performed, but we often have parts of it in our College services, particularly those splendid choruses; and now, as I sat looking over the Falls, the whole scene, waters, sky, sunshine, trees, and clouds, seemed to make up just such a chorus, addressed to the outward senses, as the other is addressed to the mind.

"The day was superb, and the various rainbows on the glittering spray—seen from a number of points—were most vivid.

The most remarkable was about noon, from Terapin Rock, forming a curve considerably more than half a circle, but not truly circular, more of an ellipsis, such as I never saw rainbow assume before. What a pity there is no moon. It must be glorious by moonlight. This morning was rather cloudy, so I set off to see the suspension-bridge, walked across it, and then up the Canada shore to Table Rock. There are many points of this line commanding better views of the whole Falls than any single view on the American side; yet I greatly prefer having my head-quarters at the latter, for there is much greater *variety* here, and Goat Island is always a resource for half-hours when one has nothing particular to do. After pausing at intervals, I started from Table Rock along the river bank to the burning spring, saw the flame, smelled and tasted the water, and so back by another road, commanding noble views of the rapids and the wide part of the river above, with its islands. These views alone, if there were no falls, would be worth a journey to see. I came home by the ferry, and was hoisted up in a car, on the inclined plane—rather a nervous-looking affair, but pleasant enough as the rope did not break. Had it broken, we should have been like

> Miss Ruggs at the age of twenty-three,
> (Who) Was launched into Eternity.

So says a poet of the Canadian shore, whose verses adorn the spot where she fell over the cliff. She was gathering a flower on the edge, and, according to the fore-mentioned poet, was famous for her *requirements* in botany. Poor thing! I must call a plant after her—*Ruggia* would sound well. Apropos of plants, I have found a *new* one (new to America), which will delight Bailey. It is a very curious little thing, rejoicing in the name *Petalonema*, and abounds on dripping cliffs between the base of Biddle's Stairs and the Horse-shoe Fall. I fear you would not appreciate it, as its expression is small, but under the microscope it is lovely."

CHAPTER IX.

TOUR IN THE UNITED STATES.

After a stay of three days, leaving Niagara with regret, Dr. Harvey crossed Lake Ontario, and having visited Montreal and Quebec, retraced his route to the former city, and returned from thence to New York by Lake Champlain and Saratoga. The next letter to his sister relates his arrival at Boston :—

To Mrs. T ——.

Cambridge, October 18.

I sailed from New York in the Empire State, a splendid vessel of huge dimensions, having 304 berths in the saloon, and arrived at Boston at seven o'clock next morning, the distance 233 miles; the latter fifty of which were by railroad. The hotel I stopped at near the Institute was a Temperance one; and there was a notice in the bedroom that inmates were expected to attend morning and evening family prayers, in the parlour, that no one would be taken into the house on the "Sabbath;" and that those who chose to leave on that day must pay their bills the evening before, or not expect to be allowed to decamp.

What of Boston? It is unlike any American city I have yet seen, and to my fancy much more beautiful—clean and well kept, with remarkably crooked or winding streets, irregularly projecting houses, stone buildings and brick, mixed together in pleasing proportions. Some fine streets of residences which would do credit to any city. A beautiful park with trees, walks, hills, and fountains. After the interminable straight and rectangular streets of other American cities, it is quite refresh-

ing to get into a place where nothing is rectangular. The town stands on a small island, connected by various bridges and railways with the land. These radiate from a centre on all sides, and folk who can afford it live out of town in various suburbs, and only go to Boston for the winter gaiety. Here is the best society in America. I am rather frightened at my present position, feeling as small among folk here as one of my own diagrams. If I only escape from them without being hissed I shall be happy, I mean hissed *inwardly*, for they are too polite to show it outwardly. Sir John Richardson has just returned from his fruitless search after poor Franklin. He says that there is nothing to show that Franklin's party had got to the Mackenzie River, and therefore that anything which will ever be learned of them must be to the east of that point, and consequently in that part of the coast which Ross has undertaken to explore. So that we may soon hope to hear news, one way or other, if nothing happens to Ross. Gray is a most admirable worker, and what he does is always well done. He is now preparing a great work on the trees of North America, to be illustrated with plates, quarto and folio. It will be published under the auspices of a fund called "Smithsonian," left by an old gentleman for the purpose of bringing out works of science which would not pay booksellers, and which would yet be valuable. I have partly agreed to prepare an account of the American seaweeds for this foundation, which is to be one of my first employments when I return to Europe, and I hope to get some good new materials in my trip to the south.

A few more of his "first impressions" are given in a letter to Mrs. Harvey.

On my arrival I breakfasted, dressed, and went out to look for the Lowell Institute, having previously seen it from my room-window. At the door I met Dr. Cotting, the curator, who asked me, was I not Professor Harvey. To which, replying in the affirmative, he led me over my *den*, and showed me where I should be baited by the Bostonian lions. Alas for poor Daniel—metaphorically me; if he escape he will be lucky. 'Tis an awfully large room, built like a church, and used as such on Sundays, having an organ; but oh what a place for diagrams! All I have got would not cover the space decently if hung out together, how much less when I can only afford to put up six or

eight at a time! These very diagrams, displayed at a conversazione as "my American diagrams," were thought *fine*, but you do things on a large scale on this side the water.

I got into an omnibus and drove to Cambridge, a rambling village of neat suburban houses, with trim hedges, and nice paling, pleasing to the eye. I was dropped at the corner of the Botanical Garden, carried my trunk inside the gate, then made for the house, and met Dr. Gray at the door. A warm greeting, and I was at home in five minutes, and am now writing in a charming bedroom looking into the garden on two sides, with an aspen opposite the window, which is rustling with a noise like ladies' silk dresses, and looking yellow as gold. Three cheers! Dr. Gray is a *trump*, and has lent me such a store of huge, big diagrams, that I shall now be rich in pictorial illustrations. I now only wish that the commentary may prove worthy of the canvas.

20*th*. Yesterday we had a dinner-party, the lion of which was Sir J. R.; but to me my neighbour at table, Professor Agassiz, shared largely in the leonine honours. He is a very remarkable man, with a most capacious forehead, ardent eye, and expressive mouth; and the inside of the man does not belie the outside. T. may remember him at the Dublin Association. He is the same person with fifteen years' development of mind, during which period he has had ever-extending opportunities of bringing his great powers into operation. He has here a large field for zoology, and is an omnivorous worker in it. No doubt he will secure a permanent station among the chief illuminators of the science. Richardson was very entertaining, though he required to be led out, not pouring his information for any one to pick up. The thermometer where he wintered last year stood between 60° and 70° *below zero*. An astronomer at table, Mr. Bond, said his thermometer only went 7° below zero last year, and the greatest he had seen it was 18°. This seemed nothing compared with the Polar winters. In latitude 68° Sir J. R. found trees of one hundred feet high, twenty to twenty-five inches diameter, and with 450 rings of annual growth. The annual rings were of varied thickness, showing that the summers vary considerably in those latitudes. After dinner we drove into town to attend a conversazione at Dr. Warren's. Here were a number of Bostonian doctors, to some of whom I was introduced. One of

them was Dr. Pickering, who accompanied the United States Exploring Expedition, and with whom I talked about the Cape, where he had stopped for a few days. I hope I shall meet him again. Dr. Warren is nephew of General Warren, who was killed at the famous battle of Bunker's Hill, and is of course very proud of his kindred. There was a picture of the hero in the room, and three oil-paintings of the battle, and two cannon balls from the field as table ornaments. There was also another highly-prized relic in a richly-gilt frame, which was handed about to be looked at. It was a sheet of note-paper on which was written, "Autograph for Dr. Warren of Boston, Victoria R., Buckingham Palace, July 20th, 1838." The Queen is very popular here, and her picture frequently displayed on parlour walls, and I have seen it coupled with General Washington at inns. Dr. Warren has a fine collection of fossil remains, and possesses the finest known specimen of the Mastodon—finer, I am told, than the one now at the British Museum, and which was formerly exhibited in Dublin under a spurious name.

To his Niece, Miss M. C. H.

Boston, October 22.

Saturday at eventide we visited the Observatory, and saw the great telescope, the finest instrument in America, and with not many superiors anywhere. We had a view of a rich cluster of stars in "Hercules," which, through an ordinary telescope, looked just like a blot or hazy star, but in the great one, the same object stood out in the sky in perfect distinctness, every star in it (and there seemed to be thousands of them) shining in his own proper sphere. We afterwards spent the evening with Professor Agassiz, who gives a weekly soirée. This was rather a grand occasion, owing to Sir J. R. being here, so the rooms were pretty full of ladies and gentlemen, chiefly scientific. Longfellow was in the room, but I missed the opportunity of an introduction. There were many other Professors, each famous for something, among them Dr. Pickering, who has been all round the world, engaged in the United States Exploring Expedition. He has published a magnificent book on the Physical History of Man.

The plates for the United States Exploring Expedition were looked at and talked over; splendid coloured folios of Zoophytes,

and fishes—innumerable beautiful and grotesque forms. Agassiz is a very remarkable man, and if he lives a few years will do wonders in Zoology. At present he is working out the history of embryo animals—tracing the development of the young creature through every tribe from the lowest to the highest, and he has already made out many remarkable facts which will be of the greatest service in fixing systematic Zoology on a firm basis. It is delightful to see and to hear him speaking, for his whole countenance lights up with his subject, and with true enthusiasm. At other times he enters into general conversation, and is pleasant, and quiet, with perfectly simple manners.

Among the striking trees here, I am delighted chiefly with the American Elm, which has a tall, straight trunk, dividing into a great many erect branches, and these crowned with a wide umbrella of leaves and branchlets, goodly to behold. Here, on Cambridge Green, is an old elm, called Washington's Elm, said to be the tree under which he first drew his sword in the great struggle. It is in full vigour, and duly protected by iron railing from mischievous attacks.

28*th*. Two of my lectures are now over; the first, a written one, rather fatiguing, owing to the size of the room; the second being delivered from notes, much less so. Some say they are interested, but I am not able to *fill* the house. About four or five hundred attend, but *that* is not thought large in these parts. The evening audience are chiefly men; the afternoon one women. I find they don't want poetry, and are quite contented with the drier details. On one of my idle days, Dr. Gray and I went by rail to Beverley, where his father-in-law has a sea-side residence. The railroad took us through some old towns, of which a noted one was Salem, an early settlement, and a primitive-looking place. Another was Lynn, where every man is a shoe-maker and fisherman—fishing in the summer, aud sewing leather all the hard weather. This trade is the great staple manufacture of these parts, 18,000,000 of dollars being the annual value of the shoe-trade in Massachusetts. The coast round Beverley is very pretty, hill and dale, with large masses of natural rockwork peeping through the soil. Mr. L.'s place is quite on the shore, sixty acres, tastefully laid out, the ornamental not intruding on the wild spots, and these adding a charm to the others. There

are little bays, and little rocky nooks with trees to the waterside; and the wide extent of Boston Bay in front, with the islands at its mouth and the ships passing up and down. It is a charming spot to spend a summer.

November 10.

Dr. Gray and I walked over a few days ago to Mount Auburn, the principal cemetery here. It is very extensive, naturally wooded, full of hill and dale, with streams in the valleys. It is laid out in walks and avenues, and thickly peopled with tombs in a great variety of patterns. On the whole, it is a very picturesque "City of the Dead," and it must be beautiful in spring and summer: at those seasons it is one of the most favourite resorts of the Bostonians, who come out in crowded omnibuses at all hours of the day to walk about among the tombs. I am told that formerly they had pic-nics there, cracking their nuts and jokes on the gravestones, but this is discontinued. At this season it looks somewhat dreary, the ground being thickly strewed with dry leaves.

Professor Longfellow honoured me with a visit a few days ago. He lives about a mile off, in a large old house formerly a manor-house, and Washington's head-quarters when in these parts. His second wife is the heroine of Hyperion. Last evening we had a social party at Professor Pierce's. The Cambridge professors are a sociable set of people, and have the pleasant custom of meeting on Saturday evenings at each other's houses, with their wives, &c., and the evening ends with a supper. I got talking to the Greek Professor (but not about Greek). He has arranged to go with me to see Laura Bridgeman. She is intimate with his sister, who lives near the Asylum, and often drops in to pay her a visit. She continues to advance in acquirements, but latterly, in reading history, is much distressed at the wickedness of the world. She wonders at it as something monstrous, and it becomes more and more difficult to explain to her the motives for political movements—wars and so forth. To her, the whole history appears a tissue of unmeaning cruelty and crime.

To Mrs. T——.

Boston, November 21st.

My lectures are now nearly over, and I believe the people have been well enough satisfied. I see ladies taking notes, and they frequently stop to ask questions. For the most part (one or two stormy wet days excepted) they have been well attended. Agassiz has been at all of them, which I think a higher compliment than if an additional hundred filled the seats. I hope to have Professor Bailey's company on my way south. He is still very delicate.

I have seen Laura Bridgeman, but have not much to add to the accounts you are familiar with. She is now about nineteen. She came into the room with her friend Miss White, laughing and talking most glibly (with her fingers). Something had highly diverted her, and kept her for some time in brisk mirth. Her friend told us she was describing how some rats had got into her room and gnawed holes in her clothes, &c. She held her friend's hand, and kept playing the fingers about with such extreme rapidity that I could hardly follow them, and could not see a single letter she made. Her friend as rapidly touched her hand, and thus the two hands kept up conversation. Her face changes instantly with the passing thoughts, and so vividly, that you would sometimes think her deeply distressed when she is only describing something unpleasant. When she heard I was from Ireland, she asked did I know "Father Mathew?" She has a great affection for him, and, while talking about him, suddenly seized her companion by the waist and then embraced and kissed her, a habit she has when anything that moves her affections is passing through her mind. Then she asked about the poor people in Ireland, and whether they would have food enough this season; and was quite distressed to hear that there was likely to be a scarcity. She takes great interest in passing events, particularly in hearing of any reform or amelioration. Miss White, her companion, devotes herself entirely to her, and seems admirably suited for such a vocation.

Dr. Howe says that, although it was found very difficult to *commence* with a case like Laura's, that now, by the experience of hers and that of Oliver Caswell, the instruction of others similarly affected has become quite easy. The problem is

solved, and there are regular rules to be followed, leading to positive results. Oliver Caswell is not nearly so interesting as Laura, not having her great talents. He talks and comprehends slowly, but there is a happy expression in his face. Dr. Howe says that he and Laura are the happiest persons in the establishment; perhaps because they have no care, and are tenderly cared for—and do not know the extent of the privation they lie under. The institution here is not confined to the blind, a class having recently been added for idiots, several of whom are now under care. Dr. Howe says that the degree of idiotcy is to be measured by the amount of language—that any person with *hearing*, and without the power of articulation, is an idiot. Several such have been under care, and are found to be susceptible of instruction, and of being taught to speak. He does not look forward to their making much progress, but finds that they can be taught decent habits, and several simple trades or occupations; in fact, raised very considerably above the state in which the institution finds them. It is delightful to see such an institution in operation, and so well supported by endowments and grants from the State.

Yesterday I went down to Providence to lecture at the Franklin Institute. The lecture was on seaweeds, treated in popular fashion. The audience, about 800. They were very attentive, and I hope edified by an hour and a quarter's discourse. Several persons are now zealously collecting here, and have sent me sundry parcels of Algæ. Unfortunately I missed the visit of a Mrs. M—, of Lynn, who was here yesterday after I had started, and again to-day before I had arrived, and who is "a wild enthusiast," as Dr. W— would say. She is, I believe, the wife of a tradesman; and, living near the coast, has taken most fondly to collecting Algæ, and spends all her leisure time at the work. She longs to know the history and names of what she finds, but as yet lacks books and instruction. She told Mrs. G— that she rises every morning at four o'clock—stealing quietly out of bed, not to rouse her husband, who, poor man, is very unwilling she should get up so early, fearing she does not have sleep enough. She then regulates the house, gets him his breakfast, and ships him off to his work; then sweeping up the hearth, off she sets for Nahant Beach; and there she spends her day picking seaweeds.

Sometimes she comes home dreadfully tired, after wandering about all the day. I am going down to see her on Monday. Nothing could surpass her delight when Dr. Gray showed her some of her favourites through the microscope. "Oh, sir, you have opened to me a new world!" She has also been to Agassiz, who has delighted her by showing her the differences between zoophytes and seaweeds, and now she collects both most zealously. I found one rarity among the parcel I have already had from her, and I expect she will make quite a valuable correspondent, as her favourite beach is very good ground. I dined last Wednesday at Mr. Prescott's, to meet the great Daniel Webster. I got rather separated from him at table, so missed much of his discourse. He gave some amusing anecdotes, very well told. He is a large man, with a quiet and rather sad or severe expression, but he lights up pleasantly with the point of his story. He has rather a measured way of speaking, as if laying down the law, but in a very quiet manner. Prescott is a very much younger-looking man than I had anticipated.

To the Same.

Cambridge, December 1.

Wish me joy. I have put the finishing stroke to my Boston engagement to-day, and am a free man again. The last words have been spoken; and I wound up with a text from the Apocrypha, which will be found in last chapter of 2nd Maccabees, not the last verse, but the one before it. The last week has been a busy one, having four dinner-parties, two of which were on lecture evenings. Last Thursday was "Thanksgiving day," the great New England holiday. You know the Puritans when they landed here on Christmas-day *fasted* that day for spite, and have ever since disowned it. So, as the years bring it round, they annually appoint another day towards the close of the year for Thanksgiving, that the harvest has all been housed, and the country preserved from misfortune. The Governor issues his proclamation, which is read in all the pulpits, and the appointed day is commenced with church-going and ended with feasting. All the shops are closed, and there is rest from work. It is also the time for family circles to assemble. Old and young meet, and have all sorts of games

and diversions for the evening. I enjoyed a singularly favourable opportunity of seeing a "Thanksgiving" meeting, being invited to dine with Mrs. G—'s grandfather, an old man of nearly eighty-six, but so hale and active that he might pass for under seventy. We sat down to table, thirty-eight, the greater part of whom were children, grandchildren, and great-grandchildren. I was the only stranger, and the few who were not direct descendants were close collateral ones. Three or four smaller fry came in before the cloth was removed, so we counted over forty. We sat down to table at 3 P.M., on account of the children, and rose soon after five, when the sports began, and a scene of boisterous mirth ensued. We had blind-man's-buff, hunt-the-slipper, thread-the-needle, and other intellectual sports, for a couple of hours, concluding with a cockfight; two gentlemen, dressed up in paper painted like cocks, enacting a capital fight. Some of us then started for the house of another old gentleman of similar octogenarian age, where we found a similar lively scene. Having stayed here for another hour or two, we then returned to our former quarters, where we found the little ones gone to bed, and the rest—from ten years of age —still amusing themselves. Some capital charades were acted. Dr. G— and myself then set out for another party, a *grown-up* one, at Mr. Ticknor's (the historian of Spanish literature), where we found a brilliant assembly talking and having occasional music. Here we staid till an early supper caused the rooms to thin, and we left before eleven, and walked home, arriving just at midnight. So we had nearly nine hours of Thanksgiving festivity. I walked home with Agassiz, who is about to be married the second time. He has a son, a fine boy of ten or twelve, and a daughter. Some time back, when he put his little boy to school—as he wished to keep up his instruction in Natural History—he offered to give occasional lectures at the school for the benefit of all the other pupils as well. The offer was gladly accepted; and he has been in the habit all the summer of giving a weekly lecture. A week or two ago, at the close of the lecture, he was requested to stop, and then, to his great amazement as well as pleasure, one of the pupils stepped forward, and, in the name of the rest, presented him with a handsome silver "pitcher," bearing an appropriate inscription. You should see how his face *beams* with delight

when anything touches his feelings, as this spontaneous tribute of the school-children did. He is a very remarkable man of genius, and yet with children as simple as a child.

I leave Boston with regret, having very much enjoyed being at Dr. G—'s, and among the Cambridge circle. Mr. Prescott (the historian) and Mr. Ticknor are both very pleasant companions, as well as very well-informed and literary men. I am only sorry I saw so little of them. The best specimen I had of Mr. Prescott was in a morning visit that I paid him. I fortunately found him alone, and an hour ran over before I thought of stirring. Poor man! Perhaps I interrupted his studies; but he was so very pleasant and conversable that I could not move off sooner, and I was much surprised, on looking at my watch, to find that time had passed so quickly.

I am sending home a box of plants. Let them be put in a dry, safe place, or sent to the College. No bad weather as yet. With the exception of a week of rain and wind, it has been charming since my arrival.

To the Same.

New York, December 9th, 1849.

I left Boston for New Haven, Connecticut, where I remained a night and part of a day for the purpose of seeing Yale College, one of the famous seats of science in these parts. I wished also to see Professor Silliman, the distinguished Professor of Chemistry. I found him just going to lecture, and I was glad of the opportunity of hearing him. The lecture was on Meteorites, and very interesting, full of apt illustration, and not without sparks of humour when combating erroneous notions of the origin of these bodies. It is a subject to which the Professor has devoted much attention, and he once witnessed the fall of a large shower of meteoric stones. He conceives them to be small bodies revolving round the earth as a centre, in very elliptical orbits, coming sometimes extremely near us, and then flying off into space as if they never meant to return. He showed the absurdity of supposing them to come from the moon, or to be aggregations of matter collected in the atmosphere. After lecture I dined with Mr. Dana the geologist, son-in-law of the Professor, who met us at dinner. After a pleasant hour or two, it was time for me to take wing. American railways are not

very punctual: we did not start till an hour after the stated time, stopped half-an-hour here and there, and once got off the rails, not getting to New York till late at night, where I found all well in Franklin Street, and took up my abode with them.

A few days after, a dinner-party was given for an Englishman who is travelling in this country. Among the company was Mr. Fenimore Cooper, the novelist, who was very chatty and pleasant. Before we left the table the conversation turned on mesmerism, in which he is a decided believer. Mr. Cooper is a burly figure, large and square, with a baldish head, grey hair, and reddish face, with a somewhat sailor-like manner. He has been in the American navy. One would not guess by his appearance that he was a man of genius, or an author by profession. Dr. Wainwright, the clergyman, was also of the party. We have just come from hearing him preach against the inordinate love of wealth, and against display of finery, which he says is a besetting sin. There was a pretty full congregation; but in the American churches to which I have been there is but little mixture of the different grades of society. They are more like proprietary chapels for the wealthy classes than parish churches for *all*. I suppose this is the result of their peculiar parish organization.

Here a "parish" is not a district bounded by geographical limits, and containing all that may reside within them, but it is a body of people who organize themselves (like a club), elect officers, choose a clergyman, and build him a church, so that there are parishes of poor people and of rich people, distinct one from the other. Your next-door neighbour may be a member of a parish miles off, at the other end of the city. The parish also *moves about;* thus, Gracechurch parish did belong to the old end of the town, but the greater part of the parishioners moved up town, still retaining their connection with Gracechurch. This being an inconvenient state of things, the next step was to move the church, so now Gracechurch has gone up town after its pew-owners. The *old* church was sold for 60,000 dollars, pulled down, and the ground is now covered with fashionable stores. It seems the rector thought he should have a richer congregation if he moved up town, and so he has. There was tremendous competition for seats in the new fabric, and the whole sold at large prices, so that modern Gracechurch

has not a single poor person belonging to it. The only counteracting influence against this structure of parishes is among the high-church party (*Puseyite* so called), who are for *free* seats and admission of all ranks to worship together,—"blessings on 'em!"

I go to Philadelphia for a few days, returning here for Christmas. The ground is white (or black) with snow (or slush), and the sun is shining brightly. The weather very pleasant—not *cold*.

To the Same.

New York, Christmas Eve, 1849.

Miss H. and I set out on a fine sunny morning for Philadelphia, drove through a flat country, sometimes of salt marshes, sometimes of meadows, then peach-orchards, towns, and "pine-barrens" (sandy ground covered with low pine-trees and oaks), till we reached the Delaware, within five miles of the Quaker City. We then stepped on board a boat and steamed down the broad river, the banks of which at this season looked dreary from the remains of the half-melted snow, and the trees being desolate and leafless. The city soon came into view, stretching far over a flat of considerable extent, with nothing in sight that we should call a hill. It struck me as the picture of a Quaker country—a dead level—the land good, rich, and well-wooded, but nothing *picturesque*.

We landed at a crowded wharf, and were some time pushing our way over fearfully dirty streets, and through interminable cars and waggons, till at length we emerged into the city proper, which is built, as you know, with perfect regularity, all the streets crossing at right angles, and their order being red brick houses with white outside shutters and white marble basements and steps. Fewer streets have trees than in New York and some other cities. *Uniformity* is pre-eminently the feature of the place. One street is so like another that it is quite necessary to look up for the name. These names are simple enough, and a stranger is at no loss, who can count his fingers and remember this doggrel:

"Chestnut, walnut, spruce and pine,
Market, arch, race and vine."

These are the names of eight great thoroughfares which run at

equal distances through the whole length of the city, and are crossed by other streets called first, second, third, fourth, &c., so that you know at once to what quarter of the city you are directed. It is a very convenient plan, though it looks funny on a card, or a letter, "26 South Thirteenth Street," &c. We dined with Mrs. W——, and in the evening went to hear Lucretia Mott, a Hicksite preacher, deliver a lecture on the rights of women. The occasion was this: a Mr. Dana, of Boston (poet and so forth), has been lecturing in Philadelphia on sundry matters. Among the rest, he gave two lectures on woman, wherein he defined her duties within narrow limits, seeming to hold (by what I could gather) with the old song, "The wife for my money maun make a good pudding," at least, he taught that her duties did not extent beyond the fireside. *Some* say that he held up Desdemona as a model, others that he did not go so far. However it may be, what he said roused the spirit of Lucretia, and so she determined to lecture in reply. There was a highly respectable audience of 600 or 800. She addressed us for nearly two hours. I agreed with much that she brought forward, and when she seemed to differ from me, her views were so vaguely stated that I should be puzzled to say where she "*got off the rails.*" Among her instances of illustrious women were Miriam, Deborah, Jael, Judith, Joan of Arc, and Elizabeth Fry. She claimed for women *perfect* equality, a wife was *not* to obey her husband, but husband and wife were the arms of a balance, and whichever was *weightiest* was *to have weight* (the illustration is mine but conveys her meaning so far as I could catch it). Women were unjustly treated in being taxed while they had no votes and were uneligible to office, &c. The laws affecting women's property were reviewed and roughly handled, and in this respect a hard case was made out. Non-resistance was held up, and women's preaching, with a variety of other matters. Her delivery was good, but a little rambling, with repetitions, and she was rather obscure on the points where I wished her to be most definite.

Tuesday, I called on Dr. Hare, late Professor of Chemistry in the University, who took me to the Laboratory, and introduced me to Professor Rogers. There I met several persons, among whom was Dr. Leidy, a young man, who will be famous if he lives, and goes ahead; according to present promises. He has

been finding new plants. Where? In the stomachs and intestines of *insects*—several new genera and species, very curious and beautiful, opening up quite a new field of research. These plants are not indicative of disease, but exist in the healthiest individuals. I afterwards met him at the Academy, and he accompanied me over the museum, the collection of birds in which is said to be the finest in the world. Agassiz and the Prince of Canino, both good authorities, say that there is no such single cabinet in Europe. They have two kinds of Apteryx, one of which, I was told, is unique. There is a specimen of the other in T. C. D. They have 180 kinds of humming-birds, and ostriches in proportion. There is a splendid series of toucans, &c. The fossils are very fine. Here also is the largest collection of human skulls—of all nations, tongues, and peoples—to be found anywhere outside a catacomb.

To this museum is appended a rich library of natural history, containing most of the beautifully illustrated works on ornithology, besides a very fair set in other branches, amongst which is the Phycologia. The whole of the birds and fossils and a great part of the books are the gift of Dr. Wilson of Philadelphia, a young man of about five and thirty, who will not even allow himself to be *thanked* for his donations, much less will he have them called by his name. He has expended (they say) some 25,000*l.* sterling for this museum, and is still giving. His object is evidently to place the science of his country on an independent footing, and this is surely a noble one.

In the evening I went to an ordinary meeting of the Academy, and heard part of a paper read by Dr. M. on skulls, wherein he asserted, *as his opinion*, founded on a most extensive examination of human skulls, that all mankind are *not* the children of Adam, but that several *distinct species* of men have been created in different countries, just as divers species of other genera have been formed. What is stranger still, he says that this opinion is not controverted by the Bible, but may even be illustrated and confirmed by it. Whom did Cain marry?

The following morning I drove, with Commodore R. and some others, to Girard College. This beautiful building, of white marble, with its noble colonnade of Corinthian pillars, and which cost 2,000,000 dollars, is merely an *orphan school*, intended for children from six to ten years of age, who are to be

taught trades and then apprenticed out. A wealthy old man left his whole property—some 7,000,000 dollars—for this purpose, with the special proviso that no minister of any religious denomination should be ever allowed to set foot within the walls! The Bible may be read, but without ministerial instruction. The will says that until the sects agree among themselves, he would not have the pupils taught the dogmas of any.

Though Thursday was wet, I got to see the Penitentiary, a large prison conducted on the solitary system by "Friends." I did not see any of the prisoners, but I visited some of their empty cells, the walls of which were covered with frescoes, in colours extracted from the old cotton fabrics that had been given them to dress for the paper-makers, the brushes made of their own hair, and other contrivances to match. The frescoes showed considerable taste and patience. The walls of one were covered with Arabesque patterns—very elaborate—and those of the others with figures and inscriptions. The number of inmates is usually 300. They have little yards in which now and then they are permitted to exercise, and there are larger spaces where delicate prisoners can have a wider range, but in no case are they permitted to see each other or to converse. The system is said to work well; but it is thought that the terms of confinement might be shortened with advantage, as the chief object of the treatment is reformation, not punishment. Prisoners sometimes seem to be reformed after a time, and then the improvement passes away, and their sorrow for crime becomes changed into revenge towards the community for having locked them up so long, so that when set free, it is not with any feeling of gratitude that they return to the outer world. They are allowed to communicate with their friends once in six months, and are constantly employed in manual labour, some trade being taught to those who are without the knowledge of any. All are taught to read and write.

I forgot to say that on Wednesday night we went to the assembly ball, which was a brilliant affair, but I soon grew tired of it, and we only remained about two hours.

On Friday I dined with Mr. P., the British consul, and in the evening met a party of doctors at Dr. Morton's.

On Sunday I went to church and heard a very *Puseyite* dis-

course. The preacher, a young man, who (in his priestly office) calls old ladies, old enough to be his grandmothers, "my child," and expects them to call him "father." These vagaries are quite as prevalent here as in England, indeed, I think *more* so, for there is less opposition. The sermon was about "our holy mother" and her teaching, and the obedience we owe to her "holy commands," all very proper and orthodox.

Monday I returned to New York, and I start for Florida on Saturday next. I hope to meet Bailey at Charleston, and now I wish you all a happy Christmas.

To the Same.

New York, December 31, 1849.

I can imagine that the winter season here may be very agreeable to those who have not to work in the open air, and who keep good fires at home, but the poor must suffer keenly. To-day I observed a little boy, and afterwards a woman, picking cinders out of the heaps of ashes along the streets—cinders so very much burned that I should not think they could be lighted, but, added to the fuel, they may serve to keep fire alive. Who would have anticipated such wretched shifting poverty in this land of plenty? but in a large city there must always be poverty. On Christmas-day the thermometer was at zero, and I thought it rather cold: it pained the face when walking against the wind. I have just decided that buckwheat cakes and sleighing are both *humbugs*, though very much talked of here, the one being *delicious* and the other *delightful*. The streets are white with snow, and numerous sleighs of all sizes are running up and down Broadway and along the by-streets, but I was not tempted to mount into any. It seemed cold fun. The snow is not yet thick enough, and so the sleighs jog and jolt along, but the happy people crowd into the vehicles, and fancy themselves gliding smoothly. They remind me of the Irish sedan (bottomless), prized only for the "honour of the thing."

On Friday I dined with Mr.——, in one of the fine houses or palaces at the upper end of the city. He is a retired merchant, and very rich. The house is magnificent: from a large square hall we passed to the library, and from thence were ushered into a splendid double drawing-room, with velvet carpet, satin hangings, and richly-framed mirrors of vast size. It

was a party of gentlemen, the principal guest being General Scott, Commander-in-chief of the United States army, and one of the Mexican heroes. The dining-room was fitted up like a Gothic hall, the whole of the walls being pannelled and wainscoted in American oak. We sat in wide arm-chairs, so that there was no elbowing. The dinner consisted of all the delicacies of the season. I did not eat canvas-backed duck, preferring grouse from Illinois; as being *farther fetched*, they must have been better. The dessert set was all Bohemian glass, very costly, but to my taste not so handsome as China. The style of living of a Fifth-avenue man in New York is more like that of a nobleman than of one of our merchants.

To-morrow will be a great visiting day, all the gentlemen going to call on all the ladies—300 are expected to call at Franklin Street. I propose paying but twelve visits, a very moderate number.

CHAPTER X.

TOUR IN THE UNITED STATES.

To Mrs. T.

Charlestown, S. C., January 11, 1850.

I WROTE to M. C. H., from Washington, and take it for granted that I told her most of what seemed worthy of note in that city. I may have omitted to mention Greenhough's statue of Washington, which stands on a wide area or square at the back of the capitol.

It is a colossal figure, sitting on a chair of state, the whole raised on a pedestal. At a sufficient distance the figure is commanding, being in the style of an Olympian Jupiter; but on approach, you are struck with the strange incongruity between the head of Washington and the naked sculptured body; the latter being quite *nude*, save a *blanket* rolled about the legs, a part of which hangs over the right arm. The idea of the sculptor seems to be the moment of his resigning his commission, for he holds in one hand a sword, with the hilt turned from him, while the other is raised as if he was giving a valedictory address. As a work of art, I am incompetent to judge of it; but I rather pitied the poor old hero, sitting on a cold stone in the midst of snow and ice without a shred to wrap himself in. I think most of the sculptured ornaments of the Capitol are mediocre, which is a great pity, as the site is a most noble one. In future times they must yield to better; but that will be when art has fixed her centre here where only her circumference now touches.

January 7th. I left Washington city by steamer on the Potomac, as far as Acquia Creek, about fifty miles, where it meets the railway for Richmond. There was much ice on the

river, and we had much ado to push through it. The stream is five or six miles broad, and had a noble appearance.

The situation of Richmond is beautiful. In the Capitol is a very interesting statue of Washington, the only strictly accurate one in existence. It is by Heudon, a French artist, brought from France for the purpose, and domiciled for months at Mount Vernon, while he took casts and measurements of Washington in every position; and here he has given us in marble the man as he stood, in every minutia of his dress, and the figure in exact proportion, yet withal, he has managed to preserve sufficient grace. The head is perhaps too much thrown back, but this is said to be very characteristic of him, so is only the more truthful. I stood long before it, and felt how much better it is that historical statues should be true to their generation, and not draped in pseudo-classical costume to the destruction of all truth.

I left Richmond for Wilmington, which I reached after twenty-four hours' travel by railway. The route, which lay nearly the whole way through a dense pine-forest, is quite level, and, for more than a hundred miles, as straight as an arrow. You cannot expect much account of such a journey unless I had reckoned the trees as we passed them. Here and there was a swamp full of Magnolias, Rhododendrons and other glossy-leaved shrubs, which were a relief to the monotony of the pines. As we came south, the trees began to be hung with "long moss," a slender species of *Tillandsia*. To see old dead boughs, clothed with long streamers of these little Epiphytes, waving to and fro in the wind, has a strange and very sombre appearance. Now and then we came to spaces where the pines had perished, their trunks and arms being left standing, naked and scraggy. In some places it may have been caused by fire, but in others it seemed to me as if they were gradually dying out, as the swamp began to collect about their roots, and I thought of the silent slow growth of bogs, and how here might be a morass in which future generations would dig up bog-deal, and wonder how a forest should ever have grown there. But possibly the railway will prevent this consummation. Most of the trees had gashes in the bark, for the purpose of making the turpentine flow; and at various spots along the road were depôts, where the material is collected and casked. It seemed to be the only produce of the district, which is what is called a pine-

barren. Occasionally we passed an open space like a young prairie. The pine here is very full of turpentine, the green boughs burning like torches, or like pieces of our bog-deal. There are two species—one with very long leaves. It is a most picturesque tree. I admire it at all ages, and where the forest was thin, I never tired of looking at tree after tree, each was so full of character.

We reached Wilmington at mid-day, where I had to put up with a very poor inn and rough accommodation. The cookery very greasy, and not over clean; but there was bread and butter, and with one device or another we got through. After dinner I took a walk in the woods, my object being to search for *Dionœa Muscipula* (Venus's fly-trap). I soon found plenty, the swamps here being full of it, yet it has not been elsewhere found. I have sent off a box of it to Kew, part being for Mackay. It is doubtful if it will bear the transit, as it will be a month at the least shut up in the dark. At a proper season there must be excellent botanizing around Wilmington. I remained only a day, and then came on here, where I am in a right comfortable house, and already in a new climate—warm and genial.

10*th*. I have now been here five days, and have had pretty well of enjoyment. This I chiefly owe to my letters of introduction, which have brought me into acquaintance with a very pleasant circle of the most obliging and hospitable people on earth, who live in a plain quiet way, without any state or show, and who have cordial, easy manners. Dr. H—k, who is one of the best naturalists here, I particularly like, for his kindness and genuine good-heartedness. To-day he gave me a bunch of beautiful roses from his garden, and took me a walk about the town, which is a quaint old place, its streets quiet, and the houses of wood, with damp, unpainted *greening* walls, tumble-down palings, &c.

Dr. Gibbs (another naturalist) and I have fraternized most agreeably; and other persons to whom I had letters have been very obliging, and would frank me from house to house over the whole of the Carolinas if I had but days enough at command. The city stands on a tongue of land between two rivers, and looks well from the water, with its several tall steeples rising above the rest of the town. This is the busy time, and cotton and rice, the two great staples, are to be seen in great abundance

on the wharves. In the summer many go away from the city, either to the mountains or shore. The winters here are not without frost, which sometimes kills the orange-trees. There are evergreens, and a profusion of roses in the gardens. The Magnolia is a splendid forest-tree. A species of palm (the palmetto) is also here. It has a somewhat thick trunk, which rises twenty or thirty feet high, with a crown of fan-shaped leaves at the top. It is not so pretty as the European palmetto, but nevertheless has a very picturesque aspect. It forms admirable piles for driving under water, as it is very tough, and suffers much less from boring insects than any other kind of wood. The common forest-pine here is the Carolina, which, with its long tassels of leaves, is an extremely fine-looking tree.

My next letter will probably be from "Key West," which will be my nearest approach to the tropics. It is in latitude 24°. Poor Bailey is not well enough to go with me. I hope to get *Sarracenia* on my return here. Three species grow in the neighbourhood.

Writing from Charleston to Mrs. H——, he further adds:—"I have presented my letters of introduction, and have seen all the folk. I am particularly glad to have made the acquaintance of Dr. H——k. He has arranged for a day's dredging, and has put sundry other facilities in my way. Dr. G——, whom I like very much, has also furthered me, but he was in some degree an old friend.

"I spent an evening with Dr. Bachman, who is enthusiastic on the question of 'The Unity of the Races,' which is exciting attention here. You know some persons doubt whether all men are descended from Adam, or whether there was not a separate Adam for every country where men of different race are found. Dr. Bachman is writing a book to *prove* that all men came from Adam!"

To the Same.

Savannah, Georgia, January 26, 1850.

We left Charleston on the 22nd in a steamer, on a brilliant day, with the sea as smooth as a lake, and the sky clear. The passage for about fifty miles was in the open sea, but in sight of the low flat shore covered with timber, and then we entered narrow channels formed between a number of islands and the

mainland. These are the famous "Sea Islands," on which the best quality of cotton is grown; but they do not seem to be half peopled or planted. A great part of the land is still covered with pine and with the palmetto, which I have mentioned before, of which there are several species; one kind does not rise much above the ground. Along the shore are sundry species of *Yucca*, or Adam's needle, which have a striking effect. They are now loaded with fruit. We steamed all the day for one hundred miles through the narrow and sinuous channels between the islands, and at 10 P.M. found ourselves alongside the wharf at Savannah. Shortly after, myself and traps (rather bulky) were safely lodged in the Pulaski House, or best hotel; I soon took possession of my quarters, and had the satisfaction of being sung to sleep by a mosquito.

Though it is only January, the weather is like that of our warmest summer days; but it is rather odd to feel such weather, and then to look out on leafless trees and on ground where withered leaves and dead stalks abound. But a change will soon come, and already the violets are in the woods, and the wild jessamine (botanical name *Gelsemium*, with a flower the shape of a yellow *Bignonia*) is beginning to open in every sunny spot. The grass also is springing up, besides which, a large portion of the forest is evergreen, and there are roses, camellias, and narcissi in the gardens.

Savannah, though an important place of trade, is more like a large village than a city. The houses are small; the streets wide and lined with trees, looking like rural avenues. There are many small squares, and, I am told, thirty-one churches of one kind or another. The city is built on a sandy plain, which is elevated some twenty or thirty feet above the rest of the country, and thus stands high and dry. The country is rather monotonous after you get accustomed to the vegetation. You are, at first sight, struck with the number of new trees, but more especially with the long moss (*Tillandsia*) hanging in thick mournful tresses from every oak, the tufts from one to six feet long. In a cemetery here there are some noble avenues of evergreen, or "live" oaks, which are draped so richly with this moss as to make them literally dressed in mourning-weeds; and one fancies that it would be pleasant to be buried under

their shade. Such trees contrast well with the glossy magnolia, and when you add to these the strikingly beautiful *Pinus palustris* and the swamp cedars, with a host of others now out of leaf; and then clothe the ground with spring flowers, you fancy that the Savannah woods, a little later in the year, must be something paradisaical.

Driving out into the country we encountered a two-storied house moving down the road (perhaps to enjoy the cool of the evening). They had it raised on logs, and were canting it along with handspikes. On our return homeward they had got it fixed up where it was intended to be. Of course it was a wooden house.

The harbour at present is full of idle ships waiting for freight. Every fresh steamer from England brings the report of a further rise in the cotton-market, consequently the holders of wool continue to hold, so the poor vessel must wait with an empty *hold*. I saw the bales of cotton pressed—which is a simple, quiet operation—a large bale being put between two enormous iron jaws, which are then closed upon it, and, while thus compressed, the ropes are tied round it. I also saw a rice-mill hulling the grain which was put into boxes, into which an iron cylinder attached to a long arm was pushed in, or let fall, and then drawn out, these hullers keeping up a rattle like a beetling-engine. It appeared a wasteful process, a great deal of the rice being broken. This broken rice, they told me, sold for very little, as it is not pretty to look at, but they say it is very nourishing, and in fact consists usually of the best part of the grain.

There is a custom all through America which strikes a stranger —that of drinking drams at the public bar of the inns and hotels. Here, every hotel, even the largest, has a "bar," which is a place like the counter of a whisky-shop, where liquors are sold by the glass. In the North you only see "loafers" (or *snobs*) drinking at such places, but here in Savannah I observe the first merchants of the place, men who are worth thousands, and who live in houses that cost 25,000 dollars or more, lounging about the bar, drinking with whoever of their .acquaintance come in. It is a sort of slight if you refuse when they ask you. This custom, at least, is better kept in the breach than the observance.

Last evening I attended a quoit-club—the Saturday evening amusement of the *élite* of Savannah. I witnessed two games, and some very good throwing. It is complained of that all the playing is in the hands of the older members, the juniors being too lazy to join in; so it is thought the club, which has lasted for thirty years, may expire from a failure of efficient players. The young men lounge on the chairs and smoke cigars, and drink brandy and water—a sad falling off.

This morning went to church and heard a sermon on the duty of fasting. The subject was treated in a rational and effective manner. I suppose the clergyman chose it because to-day Father Mathew holds forth on teetotalism in the Roman Catholic church here. I have not seen the Rev. Father.

To the Same.

Key West, Feb. 5, 1850.

If you turn to the map of Florida, you will find, stretching from its extreme southern point towards the westward into the Gulf of Mexico, a number of small islands, called keys—low sandbanks, coral reefs, or flat limestone islets, covered with mangroves, and a scanty vegetation of tropical character. Well, Key West is the name of one of these islands, near the western extremity of the chain, and the town of Key West is the capital and *only* city on the island, and numbers 3000 inhabitants. Now, having fixed my position on the map, let me take up the thread of my story. We left Savannah the 1st inst., and a few hours afterwards were steaming down the Savannah river to meet the "Isabel," a fine ocean steamer, plying between Charleston and Havannah, and calling at the Key on her way. We got on board this larger steamer at 4 P.M., at the mouth of the river, and started down the coast, which is similar in character to that of Carolina, already described. At twelve o'clock on Sunday night we arrived at Key West. Half an hour after midnight, and in rain, I was landed, bag and baggage, on a rickety wooden pier; a pleasant plight to be sure! I asked the post-office keeper to allow me to put my trunks and very bulky botanical traps in his office for the night, while I set off to look for lodging. He politely complied, and furnished me with a guide to the Boarding House, for which we were just starting, when a *nigger-gal* hailed us, inquiring, were we going to her

mother's—Mrs. M—'s? "Yes." "Well, don't go, we's full. Missus has no room; go to Captain F—'s." We went on, however, to Mrs. M—'s (which I was told was the fashionable establishment); but, sure enough, on routing up the house, we were sent off—no room! It still rained while we went to knock up the Captain; which we accomplished by entering his yard, climbing up the verandah, and tapping at his chamber window. He soon came out in his shirt; but he was full also, and could give us no room, not so much as to stay till morning. It was now past one, and he told us to try "Key West House." So off we set in quest thereof, but had not gone far when a man (the owner of said house, as it proved) hailed the guide, and called out to go no further; he had closed his house and retired from the business! no lodging—no—none from him. As a last resource, the guide proposed I should step into a coffee-house or grog-shop, the only place open at that hour, and try for a bed. As it was better than the street and the rain, I consented; but *they* also were full. The proprietor, however, handed me a chair; which I gladly accepted, as it was now nearly two o'clock, and I had been standing and walking for two hours. Here my luck began to mend; for the bar-keeper remembered a certain Mr. McCarthy, who had not yet been knocked up, and who took in boarders. So the guide was despatched to him while I remained resting. In about half an hour he returned, saying Mr. McCarthy was dressing, and would soon follow, and had got room for a lodger. He soon after arrived, and I was quickly in his house. Immediately I said to myself, as I passed through a neat little parlour on my way to the staircase, "All right, this will do." Up I mounted, found the boards clean, and a small bed, which was soon re-sheeted; and before three o'clock I was lying therein, listening to a mosquito which would not let me sleep till near morning. I was housed, however, and comfortably so, and at breakfast intimated that I wished to remain till the steamer should next come by (eighteen days hence), and was graciously permitted. I soon found myself quite at home, the host being a very obliging person, and his house, though small, very snug and clean, with humble fare—turtle being the chief meat. There are only four other boarders; so we are quiet, and I have room to make as much of a mess as I please.

After breakfast, I wandered to the beach to see what I could pick up. I had gone but a few steps when I involuntarily exclaimed (no one fortunately within hearing), "O glorious! this world is full of beautiful things." And what do you think excited my ecstacy? It was neither a snail nor a seaweed, nor even a moss—it was a fine young grove of cocoa-nut trees, waving in a strong breeze. You have no idea, from seeing them in hothouses, what palm-trees are under the open sky. They are as different as an eagle on its eyrie from the same bird in a cage. The plumy leaves, shaking to and fro and rustling in the wind, are *lordly*, as well as unutterably beautiful. Truly the palms are the princes of the vegetable world. It never struck me till I heard the sound through their leaves, how beneficent of Providence to place such huge fan and feather leaves in the hot climates, where they catch the slightest air, and play backwards and forwards on their long leaf-stalks, cooling all around them, and comforting the air with their *aspen* music.

Passing the cocoa-nuts, I got to the beach, and wandering on here, found another sort of paradise—a paradise of seaweeds. I was without my collecting-box, but could not bring myself to turn back, and went on gathering for two hours—new and beautiful forms—one after another; till at last, fearing lest I should lose any of my pickings, I thought it prudent to return home, having filled my handkerchief as well as two large cup-sponges which I picked up on the beach. I then sat in my room for six hours, arranging what I had collected, and, in the end, after putting up a hundred specimens, I had to throw away the remainder for lack of time and daylight.

This island is about ten miles long, and is formed of a sort of modern oolitic limestone; viz., oolite in the process of formation. The surface is flat and sandy, and covered with low shrubs and poor-looking trees. The cocoa-nuts have all been planted by the settlers, as well as the other ornamental trees which are scattered here and there. A large convolvulus (*C. Pescapræ*), spreads itself all along the shore. It resembles *C. Soldanella* on a large scale, which you may remember on the sandhills at Youghal. There were also large patches of a plant like heliotrope, with many other characteristic tropical shore-plants which I knew well enough as dried specimens, and have, there-

fore, pleasure in seeing in their native place. Many of them are in flower.

Properly speaking, there is no winter here. To-day, they say, is one of the coldest, yet the thermometer has not been below 65°. It is blowing a northerner, but this *cold* wind is softer and warmer than any west one I ever felt. I shall not care to delay here, the land flora is so scanty; but I hope to stay long enough to get most of the seaweeds. I have already got several new ones, and better specimens of others than I had before; but of many I have as yet found only scraps, from not knowing their places of growth. There is very little tide here, so the deeper ones must be had by dredging, which I hope to try the first calm day, and shall take the precaution to use a large umbrella in the boat to ward off the sun, as is quite necessary.

The chief business of this place is *wrecking*—that is, going out to vessels in distress, bringing them in, or saving their cargoes, and then taking salvage. *Wrecks* are, therefore, the chief subject of conversation, and the season is thought *good* in proportion to the number. Just now "trade is dull," no wreck having come in lately. Great numbers of vessels are annually cast away on the numerous shoals and reefs, and large salvage awarded. The salvage on a single vessel lately wrecked was 20,000 dollars! the cargo saved being about four times that value. The town is a neat, quiet little place, and there are some large and well-furnished "stores" (or shops), like those in country towns, where all things from a needle to an anchor can be had. The common meat is turtle, which is not bad, being cooked "after a fashion;" but the *luxury* that I prefer is corned pork and cabbage, which we have been favoured with both days since my arrival. I have been living for the last month on roast turkeys; now we shall try a bout of salt pork. It is curious that one fancies salt meat in a hot country to be better than fresh. We have no fruit nor luxuries of any kind. I am thankful, however, to have a clean bed and quiet quarters, which is more than I expected.

I think I told you that I had refused a call to New Orleans. I hated the idea of going *wholly* among strangers, so I pleaded previous arrangements, and came here.

21*st*. I have decided to remain for the next boat, so am

booked for the 8th of March, when I intend to return to Charleston for the meeting of A. S. Association. Thence to Washington, Philadelphia, and New York; and then *home!* I am beginning to wish to be back again once more, notwithstanding the heavenly climate and flowery soil. Excuse stupidity, for know that we are here out of the habitable world, without post or newspaper.

Washington, March 24, 1850.

I left Charleston on Saturday last, where I spent a week very agreeably in attending the meeting of the American Assembly for the advancement of Science. I arrived here on the Monday following, and have delivered three lectures at the Smithsonian Institute. I did not intend more, but was pressed for a fourth, so agreed to it. The audience is a highly respectable and intelligent one, and they seem pleased with what they hear, notwithstanding that my manner is the very reverse of Yankee fluency. I give it to them in the same stumbling, blundering way that I practise in Dublin, and yet they seem to like it.

The meeting at Charleston, though small, was a very pleasant one, perhaps more so than if it had been larger, for all the sections met together; and thus we had a variety of papers and subjects, and the observations of different classes of men were brought out, on each other's pursuits. Thus we had physical science men, making remarks on natural history papers, and vice versâ—and often the mutual connection between the most opposite pursuits and sciences was thus made apparent. Even my Algæ were lugged in, by men who had been investigating the course of the sea currents; and I was surprised to hear incidentally (since I came to Washington) that some random observations which I had made about the distribution of the Algæ on these coasts had preceded me here, and were thought interesting. I repeat one little story:—

Professor Bache, the superintendent of the coast survey—a man of first-rate reputation in physical science—gave us an account of the examination of sand, dredged at various depths on the coast by the officers attached to the survey. Many hundred bottles of this sand were put up—carefully labelled, depth and situation noted, &c.—and were then submitted to a

naturalist for examination. That gentleman found in the sand multitudes of microscopic shells (see account of *Foraminifera* in Seaside Book), and also that the species varied in the different parcels. Further, that according to the *depth* of water, the species were different; and this with so much certainty, that it required but an examination of as much sand as stuck to the deep-sea lead to tell the depth of the water. When Professor Bache sat down, Lieutenant Maury of the U.S.N. got up. He has written much on meteorology and oceanic currents; is superintendent of the Observatory here, and well known at this side of the Atlantic, as also among scientific men at our side. He said that the paper just read seemed to him to be the first step in what he might call *conchological navigation*, or groping one's way in hazy weather, by aid of a knowledge of the bottom; and then he told a story of having been himself out in an open smack, without nautical instruments on board; how a dense fog came on, and they did not know where they were. But the boatman kept continually at work with his "blue pigeon" (deep sea lead), carefully looking at everything that stuck to it, till at last a fragment of shell came up, and the boatman cried out, "All right now, sir, we're off Hog Island!" and so it proved on the clearing up of the fog. There is a story to show that even so useless a study as that of shells may be of some value, even to a sailor! Agassiz was the great gun of the meeting, and brought forward many very brilliant, though short papers, sparks struck from the steel to set minds at work, and to suggest researches to working naturalists in all departments. His fine thought, of reforming the classifications of animals by a more intimate study of their young in the various stages from embryonic life to full development, grows apace; and if he lives to bring out his conception of a system based upon this, it will not only crown his memory for ever, but be the greatest step of the present age in zoological science. I hope no interloper may come in to rob him of the fruits of his labour. We had some new observations from him furthering his main idea, one of which will sweep away a good deal of the present system of comparative anatomy; yet his induction, so far as I can see, is unassailable. It is based on the metamorphosis of organs, a sure ground to build on. But why write you all this natural history stuff? I know Agassiz made a great impression

in Dublin. He is certainly a man of extraordinary genius, great energy, and with the most rapid inductive powers I have ever known. I could not help saying to myself, as I sat and listened, Well, it is pleasant to be *hearing* all this, as it is uttered, and for the first time. If one lives to be an old man, one will have to say, "I remember to have heard Agassiz say so and so," and then every one will listen, just as we should do to a person who had conversed with Linnæus or Cuvier. He is withal a most simple-minded unaffected man, and one cannot help loving him. We have *fraternized.*

I sat out all the meetings, which ended at 8 P.M., when we adjourned to conversaziones, which generally lasted till midnight, so I had no time to see any more of the neighbourhood of Charleston. I am now moving too rapidly north for the season, and I rather regret not seeing more of the approach of spring. Crocuses are in blossom, and the fields are full of *Draba verna,* a little atom, which in some places is so abundant as to whiten the ground, from which you may infer that the soil is not very fertile.

I am staying here with my friend Professor H——y, who is very kind and pleasant. His family are a homely circle, in which I am quite at my ease. I have twice been at sittings of the senate, and have heard a good sensible speech on the *Union* question, which is now agitating folk here. The whole session has been a stormy one, scarcely anything else discussed but questions affecting union or disunion of North and South. The bone of contention is Slavery.

CHAPTER XI.

HOME LIFE AND CORRESPONDENCE.

To Dr. A. Gray.

T. C. D., Dublin, May 16, 1850.

I GOT home on Sunday morning last, after a passage of thirteen days. We had a slight accident at sea, which detained us some hours, otherwise we should have come in two days earlier.

It is delightful to get home, but I shall scarcely be settled for a month to come. I think of going to London next week for a few days. Hooker writes me that the garden is looking magnificent, and that *Pinguicula lutea*, which I sent in quantity from North Carolina, is blooming beautifully on an artificial sphagnum bed, where a great variety of bog-plants are grouped together.

My conversazione is fixed for the 30th. I hope it may succeed.

To Mrs. Harvey, New York.

Trinity College, Dublin, June 21st, 1850.

S. used to say I never had a good word for your country; but since I returned home I have had many times to combat prejudices and ignorances of a deep dye, so that I am considered "quite American" by many. I do not plead guilty to the charge, in the large sense they give it, but I certainly wish to speak fairly on the subject. I am loath to confess (to myself even) a certain deterioration, which my constitutional principles have experienced since my transatlantic journey. You know I am not a Republican in *any* degree, yet I must allow that certain anomalies in our system of government have struck me since my return as they never did before; and I am sometimes

saddened in thinking over the vastness of the amount of social evils, through which not merely Ireland, but England, has to struggle in the coming half century. I am not disposed to take so gloomy a view of the future as many do, but I cannot help looking anxiously forward in many ways. As to church matters, the decision on the Gorham case has created much scandal, and may lead eventually to great changes in the position of the English Church. There is a growing desire among her sounder members for freedom from state trammels; and I believe she has life enough to throw off the yoke, and to survive and flourish, if only this could be done by a united movement in all ranks, both of her clergy and laity. But that bishops appointed by the state should head such a movement, is not to be looked for, until the State has oppressed them beyond endurance. It is idle, however, for me to give vent to such thoughts.

To the Same.

Trinity College, Dublin, June 27, 1850.

The Asia[1] made her home run in nine days and a half, the Atlantic[2] in something over ten days, so we shall say nothing but that there's a pair of them, and long life to them, and many a happy passage, &c., and may some of you come across some of these days in as good style, &c.

As to jealousy between the two nations, it is every day becoming more foolish, which is the natural result of a closer intimacy, but I trust it may all wear out in time. *We* (I speak nationally) think *you* (nationally again) very prejudiced, and *you* think *us* so, and in my sober opinion we are both very right in our estimate of each other, but we are both pretty blind to our own failings. However, the more we get mixed together the more this sectarian rust will brush off, and then what polished and liberal nations we shall be!

A few evenings ago I was sitting quietly working at dry plants when a knock came to the outer door (of my college rooms). I answered it, and there found a porter showing a gentleman the way. "Is Dr. Harvey at home?"—"I am he."—"I'm the Rev. Dr. S. of Charleston."—"Oh, my daer sir, I'm very glad to see you; walk in."

[1] English steamer. [2] American steamer.

I *was* really *very* glad to see him—meeting him here recalled all the other pleasant faces and agreeable people that I had met in Charleston, and thus turned him into something of an old friend. So I set to, to discourse Mr. S., who I found had left Charleston almost as soon as I did, and so had nothing new to tell me. But he was very full of a book that he has just written, the object of which is to prove that all mankind came from Adam and Eve, in opposition to Dr. H. and Agassiz, who say it is no such thing.

What he wanted of me was to tell him where to find Professor Scouler, one of our savants, who is also an ethnologist and a unity man. The college porter could not tell him where Scouler lived, or whether there was any such person as Scouler in Dublin—or in the world. Oh fame! here was a learned doctor of Charleston come across half the world to see a learned doctor of Dublin, and finds the janitor of Trinity College ignorant of the very existence of the Professor. Fortunately Dr. S. remembered my name, and still more fortunately (a wonder, too, for porters' heads are very thick), the porter knew my "whereabouts," and woke me up. When I found what my reverend friend wanted, I proposed to start in search of Dr. Scouler, and so off we set, at past ten o'clock at night, to find the Doctor, who lives in lodgings in the suburbs, more than a mile from College. When we got to the house, the servant seemed disposed not to let us in, but on sending my name up stairs (I said nothing of my friend), we were shown up, and there we found the Doctor enjoying his notions of "otium cum dignitate." There he was, with neck comfortably open, sitting at a table, smoking a long pipe; a large paper of *tobacco* (a heap, twelve inches diameter, and eight inches high, on an open sheet of paper), and a folio edition of Aristotle in Greek open on the table before him. When he saw the stranger the pipe was laid down, and they tackled to the unity of the races. How they ended I don't know, for the discussion was adjourned owing to the lateness of the hour, and Dr. S. and I departed, he to his "hinn," I to my college. Next day being Sunday I got him tickets to a reserved seat at St. Patrick's, and on Monday took him and his party round the college and academy, and so bidding them a farewell, they went on their way rejoicing, and I saw them no more. I was amused at the figure we found

Dr. Scouler in. He is a very learned and very talented man. I suppose Dr. S. will bring back a droll account of the interview.

To the Same.

Trinity College, Dublin, July 11, 1850.

I did not write to you last week, being the 4th of July, when I was too much absorbed in loyal grief over that melancholy anniversary to venture a pen across the Atlantic.

There is no need to tell you what has been with us the absorbing topic of last week's conversation—the great loss the country has sustained in the death of Sir Robert Peel. Only sixty-two years of age, and for forty years he had stood in a prominent public position, and for many of those years filled the first place in the ministry. All parties have united in mourning his loss, and showing respect to his memory; and especially in the manufacturing districts marks of public sympathy have been awarded. The Assembly of France paid a higher compliment to him than our own House of Lords, in placing a minute on their journals expressive of sympathy—a most remarkable tribute to the memory of an Englishman from Frenchmen. The same week witnessed the death of the old Duke of Cambridge—a good old soul, but no loss to the public generally, save to the many charities where he presided, and for which his presence at their public dinners used to encourage subscriptions. And now to-day has died here poor Jack Spain, an old cripple that I used to employ to bring parcels between the college and the quay. He had a donkey and cart, and earned a miserable livelihood by carrying parcels, but was so much of a cripple that his customers had to help him to put up anything that was at all heavy. And now he has died while the bells are tolling for a royal duke. The contrast is so great between the conditions of these two that if we are to judge of man by his physical and mental development, one is tempted to believe in the "unity of the races," in spite of Dr. H. and Agassiz. When you see such a hiatus between two who are certainly descended from a common stock, there is hope for the Negro still.

Dr. and Mrs. Gray have arrived in London. I look forward with infinite pleasure to meeting them again. I wish more of

my American friends would drop in on me as friend S. did, of whom I wrote you.

Vacation is come, but I have not yet set off. I am finishing up my Notes on Wilkes's Algæ for Bailey, and mean to end them before I take my holiday. There are more new species among them than I anticipated. I wish you could let me know *how* Bailey is, and whether he is back at West Point yet? . . . Dr. Hooker is expected home from India by Christmas. I have had many letters from Mrs. Griffiths, who is as active as ever in her green old age. She has been touring about for the benefit of her daughter's health; and only a day or two ago she wrote me a long critical letter, giving me information about the *fruit* of one of the Algæ, which I had not before known, and which will cause me to put a supplementary plate to the *Phycologia*. She is a wonderful specimen of vigour at eighty-two.

To the Same.

Plassey, August 1, 1850.

My next letter will probably be dated from the coast of Antrim, as yours will from Longbranch. It is very different from your sandy pebbly beach, with nothing but sea-bugs to enliven it. *Apropos*, if you see the fishermen picking those sea-bugs I shall be obliged if you will put a few into a bottle of spirits for me, and send when opportunity offers. I find we have not got them in our Museum, and those I collected were dried and in bad order. . . .

This day is intensely still. I hear nothing but the distant sound of the river falling over the mill-weir. I sit at an open window looking out on the lawn, with the river and Keeper Mountain, and the plantations of Mount Shannon (Lord Clare's) in the distance. It is a very pretty scene in its way, though not like your Hudson views; for the Shannon here is not navigable, and is only crossed by small flat-bottomed boats. It is however a broad stream, and the water is quite clear, running over a limestone bed. You say we never have sunshine here. 'Tis not so; there is a good bright shine and dark shadows on the grass, and the sky is not the less beautiful for the few masses of fleecy clouds which float in it lazily. The weather for the past week has been most favourable for the harvest, and we look

forward to a plentiful crop. The potato disease is here and there through the country, but nowhere as yet very severe, and though some of the crop will be lost, I hope fully three-fourths will be saved. The quality of the potatoes this year is as good as I ever remember it.

The month of August was passed by Dr. Harvey in company with some relatives at Cushendall, a village on the northern shore of the county of Antrim, where he describes his time as being spent, "walking about" and the "dirty work of picking and cleaning seaweeds." While at this place he received a letter from Mrs. Alfred Gatty, a lady well known in the literary world. He found in the intellectual mind of his new correspondent a kindred delight in the kingdoms of nature, from which she has drawn so many charming "Parables," attractive alike to both young and old.

Their intimacy increased with their knowledge of each other, and gradually ripened into warm friendship, and the survivor's affectionate appreciation of her friend is touchingly displayed in the interesting tribute to his memory already noticed in the Preface to this Memoir.

Mrs. Gatty has kindly furnished the editor with the following brief account of the commencement of her acqaintance with Dr. Harvey :—

"In the summer of 1850 I found accidentally at Filey, in Yorkshire, a specimen of what I took to be the *Chrysymenia Orcadensis* of Dr. Harvey's 'Manual,' *in fruit*. Fruit on this plant was a *desideratum*, none having been observed on the Orkney specimen, and some uncertainty hanging about the species in consequence. But I knew so little of Algæ at the time, that I had no confidence in my own opinion, and it was not till after some weeks' hesitation that I ventured on what then seemed the formidable[1] step of addressing Dr. Harvey personally on the subject, enclosing a sketch of the supposed *Chrysymenia*, and offering to send the plant itself, if worth his attention.

"It is an old story, one that has happened to hundreds of

[1] A winter of illness at Hastings, many solitary evenings of which had been cheered and charmed by the loan of the thirty-eight numbers then out, of the *Phycologia Britannica*, had taught me to look upon Dr. Harvey as one of the great men of the day. Every one is so who is master in his own line.

others, and Dr. Harvey's kindness on the occasion is but one of many similar instances. But the plant is still a rare one, and his letters tell its history very prettily, besides showing the amiability with which he received the least morsel of assistance from amateurs, however ignorant."

Cushendall, County of Antrim,
August 16, 1850.

MADAM,

Your very obliging letter containing a drawing of *Chrysymenia Orcadensis* was forwarded to me from Dublin to this place, where I am passing a few weeks on the seashore, for the purpose of collecting Algæ. I hasten to thank you for it, and to say that I should esteem it a great favour to be allowed to examine the original specimen and to compare it with my Orkney one. My specimen has no *fruit;* and if a new character be found in the fruit, it would greatly tend to establish the species.

At the head of this sheet I have sketched (from the proof of Tab. 301 of "Phycologia Britannica," which will appear in the *October* number) the *outline* of the Orkney plant, by which you will see that it is much *broader* in the frond than yours. Your drawing reminds me of a specimen which I have from North America, and to which I once assigned the MS. name "*rosea*," without examining whether it had sufficiently distinct characters to constitute a species. I should like therefore to have the opportunity of comparing with the American plant also.

If you will trust me with your specimen it shall be carefully returned, with as little delay as possible. I shall be in Dublin (I expect) the first week in September, but remain only a few days; and if you kindly address me to the college about that time, I should examine, compare, and return your specimen before leaving home, and I should particularly wish to do so at that time, as I shall have then to send forward the MS. of the "Phycologia Britannica" description of *Chrysymenia Orcadensis* to the printer. It will give me great pleasure at all times to assist you in any algological difficulties, and, again thanking you for your letter, I am, Madam, with much respect, your obliged servant,

W. H. HARVEY.

Trinity College, Dublin, September 9, 1850.

MADAM,

I feel much obliged by your sending me the interesting specimens from Filey to examine, and still more for the kind permission you give me to keep the best of them; but I have not availed myself of this liberal offer, at least, to the *full* extent, a *branch* of your plant being quite ample for my purpose, and this I have taken off without greatly injuring your specimen, which is herein returned. As some slight return, I enclose specimens of the rare *Carpomitra Cabreræ*, *Stenogramme interrupta*, and *Gigartina pistillata*, which I hope may be new to you. And now for the Filey plant. I find, on comparison with the American *C. rosea*, that your specimen is so nearly identical that it must be regarded as the same species, and that the Orkney specimen (*C. Orcadensis*) differs only in having a broader frond. As I am unwilling, however, to make *two* species of plants so nearly related, I propose reducing *C. Orcadensis* of the Manual to the previous *rosea*, of which it will now constitute a variety. It will therefore stand in the October number of the "Phycologia" as *C. rosea, var. Orcadensis*, and I must give in the Appendix another plate from your Filey plant as *C. rosea, vera*. The figure and description having been prepared altogether from the Orkney plant, I have allowed them to stand, but have mentioned the Filey plant in the remarks under the description, and stated my intention of figuring it hereafter. I hope it may be found again, with both sorts of fruit. The fruit in yours is *Tetraspores*, which are somewhat differently arranged (as you properly observe) from the same parts in *C. clavellosa*.

A neighbour of yours, Mrs. Hayden of York, has sent me a specimen of *C. rosea*, also from Filey, but smaller than yours, and not in fruit. I have named your specimens, and remain,

Madam, very truly yours,

W. H. HARVEY.

"The correspondence which had opened so auspiciously for me went on for some months upon Algæ. Dr. Harvey professed himself glad of a correspondent from 'a new part of the coast, and one little explored;' and I, on the other hand, was proud to find myself in the position of even making an attempt at being useful to the author of the 'Phycologia Britannica.' But this

was not all. Very, very early the kind-hearted sympathetic nature of the individual man showed itself unmistakably. In the letter in which he assured me a correspondent from a new part of the coast was valuable, he said how glad he was to hear 'another instance of pleasure derived from the study of natural history, taken up for amusement either in sickness or sorrow,' and sent a copy of his 'Seaside Book' for my children. Dry letters of information his never were, even on dry subjects. While still addressing me as 'Dear Madam,' and treating of nothing but Algæ, he would indulge in a little outbreak of fun."

I am sorry that you were at the expense of sending the *large* specimen (of *Ectocarpus granulosus*). You would have seen it stated in "Phycologia Britannica" to grow "from four to eight or ten inches long," and in deep water it may be expected to attain or surpass these limits. What would you say to *Delesseria hypoglossum* four or five feet long, as it is in the north of Ireland, or a single plant of *Rhod. laciniata*, covering an ordinary round drawing-room table! Yet such things be!

Yours very truly,

Munchausen!

"Letters on marine botany, however, even when amusing as well as instructive, are hardly in place in a memoir; and it was many years before our correspondence became less special in its character. Yet it was through marine botany it did so. In the winter of 1857-8 I wrote word that I was thinking of compiling an introduction to the study of seaweeds, a 'Horn Book' of algological language, which should make his scientific terms intelligible to young students and amateurs; and I took council with him on the subject. To what purpose, a few letters selected from the mass of kind ones written to help me in my work, and which will appear in their proper place, will show. That his help was needed was enough for Dr. Harvey. He was ready with it at all times and seasons, answering questions, giving as well as lending books—specimens—anything, in short, which he thought might be of use, and even anticipating what might be wanted or wished for. It is a pleasure, though a melancholy one, to record this now, and to express gratitude for what is, alas! a thing of the past.

"He revised and corrected all the proofs of the 'Horn Book,' as far as it was printed, as he subsequently did those of 'British Seaweeds' many years afterwards. And this in spite of his almost morbid dislike to going over old ground a second time. But for which feeling, indeed, we might have had a revised edition of his 'Manual,' a boon to the public which it was almost cruel on his part to withhold.

"Such is the account of the origin of our friendship, and it will serve to introduce those of his letters to me which my friend, the editor, may think suited to these pages.

"I should in vain attempt to say how honoured I feel to take my place in them as one of Dr. Harvey's many admirers and friends."

To Mrs. Harvey, New York.

Giant's Causeway, August 31, 1850.

Put this letter down to my *misfortunes* and not to my credit, for had it been a fine day I should have been jaunting to "Carrickarede" instead of writing to you; but it has set in for a thick sea mist and fog, and we have accordingly settled ourselves in the hotel to employ ourselves as best we can. . . . I must now tell you something of our doings here, though it is mere folly to write on so hackneyed a subject as the Causeway, of which those who have not seen it can know very little, and of those who come to see it, three-fourths appear to us to go away with a very imperfect knowledge of what they came for. There are flocks going and coming, just as they do at Niagara—taking a peep and off again; whereas, half the pleasure is in taking one's leisure and finding out new points of view for oneself. On Sunday last at Cushendall (it was a stormy Sunday, and we were shut up in the house) our quietude was broken by seeing a party of seven arrive, with such a profusion of trunks that I was sure they must be Americans; and so they proved, for they were my friends, Mr L——, of Boston, and family, en route to Causeway. I was very glad to meet them, and we had half-an-hour's pleasant chat before they set off. They moved at a rapid rate, driving through the country at the greatest speed, and stopping for nothing by the way. Here at the Causeway they merely called en route, running down to the shore with a guide and back again, and, of course, missing all the beauties of the

cliffs, which to us are the chief charm of the place. The Causeway itself is of course the most wonderful part of the shore, and you may walk over it in half-an-hour and bring away a tolerable memory of its structure; and you may see, in the same space of time, the neighbouring cliffs, which are very beautiful in their way, and a fair sample of the rest; but there are splendid walks along the tops of the cliffs for miles, following the indentations of the coast, where every turn opens some new and beautiful or grand form that such hasty tourists miss altogether. The basaltic pillars extend a long way, in some places being very perfect, in others obscure, and sometimes curved or twisted, sometimes straight. Then there are cliffs where the rocks are stained red, brown, and black, which contrast well with the green patches that cover their less precipitous sides, while the white waves, dashing at their feet, add another colour to the picture. The general aspect of the country round is bleak and bare in the extreme, but not the less welcome to us on that account, as it the more strongly reminds us of our favourite Miltown, where we first saw the ocean, and where there is not a tree for miles around. When you come over I mean to bring you here and to insist on your staying long enough to see it properly. There is a very comfortable hotel. There are sundry matters to pick up on the shore and plenty of seaweeds. Among the latter I have just picked up a battered stem of a large seaweed, which I gathered in perfection at Halifax, and which is *new* to our shores, but my specimen, covered with *barnacles*, seems to have been long adrift, and may have been washed across the ocean to these shores, so that it is hardly *honest* to publish it as an Irish plant. We have three more days to spend here, and I hope they may be fine. Yesterday was charming, at Dunluce Castle and the rocks about it.

To Mrs. Gray.

Upper Abbey, County Tipperary, October 8, 1850.

Your pleasant letter was forwarded to me at Limerick, where I had been staying some days with my brother, on whose account I was obliged to leave London so hastily. In a few days I hope he will be as well as ever again.

I came here yesterday to see some relations. You must not think, by my writing from an Abbey, that it is an old monastic

house with cloisters, &c. It is merely a pert, modern dwelling built on the Abbey lands. There are the remains of an Abbey on part of the grounds, but it is only a ruined wall with ivied gable end and window. When it was thrown down I know not; but my friends are "Cromwellians," so I suppose their ancestor had something to do with the spoliation.

You know that Tipperary is the most famous country in Ireland for murders, particularly the amiable practice of shooting landlords. I had scarcely entered the county yesterday when I saw a huge placard offering 60*l.* reward for the discovery of some affair of the kind; but we don't speak of these things in Tipperary, no more than of duels in Arkansas. They tell me that things are quiet of late.

I know nothing of your neighbourhood in Herefordshire, but October is generally a very pleasant month in the country—clear air, strong shadows, and plenty of *fungi!* If you have woods about you, there ought to be hundreds of beautiful fungi just now; and even in the lawns there are some charmingly delicate Agarics to be found in October mornings, glistening with dew, and perishing in the course of the forenoon. I have no doubt Gray will be greedy of work, and will make a rapid progress with Mr. Bentham. You quite misunderstood the *omen* in the knife—" to cut strife," is to cut it in pieces, and throw it to the dogs. It is quite a lucky and good omen!

To Mrs. Harvey, New York.

November, 1850.

What a sad death occurred at one of your New York hotels lately, that of Mrs. Bell Martin, an heiress in her own right to half an Irish county! Her father used to say that the avenue to his house was thirty-six miles long! for you travelled that distance after entering his estate before you reached it. In fact he was more like a petty prince than a private gentleman, and was commonly called "King of Connemara." Irish extravagance and election expenses for several generations, with carelessness and indolence in managing the property, encumbered the fine estate with enormous debts; but nevertheless his daughter succeeded, it was supposed, to an income of 10,000*l.*, per annum. Then came the famine and pestilence, and swept his tenantry off the face of the land. Then the poor-rates, to

eat up what was left—the caterpillar after the cankerworm, until she was forced to seek a temporary refuge in your country. But there she landed only to die from the effects of the long sea voyage! a sad winding up to one of the old Irish families, for she is the last of her race, her husband having only taken the name of Martin on their marriage.

I am glad to hear that M—— is to see a little society this winter, and shall look to hear of her first party, and whether it is a "pink and white" one, or all the colours of the rainbow. She will soon get tired, I fear, if she cannot join in the popular dances; but I quite agree with her taste in avoiding the Polka. It cannot hold its ground I should hope much longer, and yet it is hard to foretell how long a fashionable folly, be it ever so ugly, will last. I suppose we must wait till the French send us something better, or perhaps our friend the Pope may take it into his head to regulate this matter for us.

You never see the English papers, I suppose, or you would be weary with the constant report of meetings and speeches about the new Popish bishops. For the last month they have been daily filled with the subject, and I heartily hope the result may be that some good and sensible measures may be taken to put the poor church in a state of organization, which will enable her to meet the enemy. Nothing can be more anomalous than her present situation. She has bishops, but without episcopal power. No bishop can control his clergy except through the civil courts, and then there are so many appeals from one court to another, that it is ten to one but the bishops will be worsted after having been put to enormous legal charges. How I wish that we had an organization like the American church, and such a wish is gaining ground amongst us.

But I must not bore you with this matter, though here it is almost the only thing talked of in all companies, and one on which my thoughts have been pretty busy. What a hubbub this Bull (which is only, as its name imports, a bubble) has thrown us into—"hubble bubble, toil and trouble! The Bull in the china-shop was nothing to it.

I hear that the London Zoological Society have already "cleared" 10,000*l.* (50,000 dollars) *profit* by exhibiting the Hippopotamus, and that they expected to clear half as much more before the fashion should go by. Now as the admission is only

a shilling on common days, and sixpence on Mondays, you may judge the number of visitors. 500*l.* in sixpences has been taken in one day, and a corps of police are obliged to be in attendance to regulate the pressure of the crowds, and all to see a great ugly beast with a big mouth. Well, I suppose you prefer the Nightingale;[1] but the Londoners are not particular, and would crowd as much after anything else if it were the fashion. I should think that if Cardinal Wiseman were to exhibit in his robes at sixpence per head, he would soon clear the cost of his pallium; and perhaps have sufficient left to build a palace.

January 30th. Have you seen a book called "Durand's American Algæ?" One of my Brooklyn friends writes me that such a book has appeared, destined to forestal me. I suppose Mr. D. could not brook that a *foreigner* should write on "*free and independent seaweeds.*" I have just finished drawing twelve quarto plates for the Smithsonian Institute, and shall begin the letter-press as soon as I return from Lurgan, where I go in February, to give a course of lectures for the Royal Dublin Society, which will keep me from home about three weeks.

To Mrs. Gray.

Trin. Coll. Dublin.
Feast of St. Theodosius the Cenobiarch,
Jan. 11, 1851.

Don't you wonder where I find my saintly knowledge? In a queer book called "The Pocket Encyclopædia of Natural Phenomena," by T. Forster, M.B., F.L.S., &c., which I found on a stall for 2*s.* 6*d.* It tells about all the flowers that blow and the birds that sing on every day in the year, and gives a saint to each day besides; and when they are *very* droll, I write on those days. Had I written yesterday, it would have been *St. William's* day. Some days have half a dozen patrons. On the 18th of this month would be a good time to write to Lady Morgan, as it is styled "St. Peter's *chair* at Rome!"

I have had such a nice long letter from Bailey, who is greatly better in health, and hopes to get through the winter and spring at West Point. He has 275 species of *Diatomaceæ* from his Florida tour. This for Gray.

[1] Jenny Lind, then in New York.

Where is the sheet of "Wright's Plants?" Answer—with the snow that fell last year. My sister wrote you a few days ago. We are *obliged* (very!) to *you* for teaching J—— *Yankee Doodle*, which salutes our ears often at unseasonable times. Last night they had bird-calls, and were imitating the shrillest and most persevering canaries till we were weary. How delicious the quiet of the College, where I have got a new easy-chair in which I can sit and read no-popery pamphlets. Have you seen one by "A member of the United Church of England and Ireland?" It is capital, and real pleasant reading. But he is severe on the poor Puseyites, and, I fear, justly.

To Mrs. Harvey, New York.

Lurgan, Feb. 24, 1851.

I am still detained here by my lectures; but time has passed agreeably enough, as I have had sufficient to occupy me, either reading, writing, or working with the microscope.

One day I went to Belfast (twenty miles distant), where I saw several of my friends, and the Botanic Gardens. I also walked over Queen's College, a new building of handsome structure, in the Old English style, with a tall central tower, from which there is a view, beautiful even in winter, but which must be really lovely in summer — a broad valley, winding river, picturesque hills, mills, chimneys, and houses, and the wide stretching *city* (as you would call it, but it is merely a *town* with us, though a large one); and then, in the near view, you look down on the Botanic Gardens, like a map. The College has much better lecture-rooms than old Trinity—to our shame be it spoken—though we are the larger body by many a score.[1] Their library is a beautiful room.

Yesterday (Sunday) a friend drove me to Armagh, fourteen miles distant, the seat of the Irish primacy, and the see of St. Patrick; though his relics repose elsewhere. I had never been there before; the day (for winter) was beautiful—clear blue sky and sunshine, but rather sharp air. The larks were singing gaily overhead, and the fields were green, as we have had no snow this winter and very little frost. Armagh, though a renowned and ancient

[1] A detached range of buildings for museum and lecture-rooms were erected on the grounds of T. C. D. in 1855.

city, is a small place, but beautifully situated. It is built on and among a number of small hills, with deep valleys between; the houses neat and of stone (Armagh marble), and the streets clean. There is a very respectable public park for the citizens, neatly enclosed, and with gravelled walks. But our attraction was the cathedral, which stands on the highest hill quite above all the other buildings. We arrived after a two hours' drive on an Irish car, and entered the church just as the Psalms were begun. The service was choral, of course—well performed, and the music very good; but what delighted me especially was to see nave, aisles, and every part beautifully clean—a rare thing in our cathedrals. Most of them are dilapidated—shame on our bishops, deans, and chapters. I was also greatly pleased to find that there were no pews—all open seats—the rich and poor treated alike, and half of the congregation were of the humbler classes. All the seats were cushioned with the same stuff, and each person had a hassock to kneel on. There was nothing to prevent a mixture of ranks in the same seat; but on looking over the congregation you saw that each had gone to the side where it saw most of its neighbours. The building has been restored from dilapidation by the present primate, who expended 20,000*l.* of his *personal* property on the good work; and it does him great credit. It is in early Gothic style, before very pointed arches came into fashion. Compared with an English cathedral, the whole is small and simple. I never enjoyed the choral service so much, or felt that it was so *un operatic*.

After service, we walked about the town, and climbed another hill, on which a Roman Catholic cathedral is being built in a style of magnificence which will quite throw the *Old Church* into littleness. The famine, however, interrupted the work, and for the last five years nothing has been done.

On another hill is the Observatory; but as it was Sunday we only climbed this so far as to get a view of the primate's park and palace—a worthy residence for the chief of the church, and such as St. Paul never enjoyed, nor even St. Patrick. The present occupant is a very estimable character, and greatly beloved by rich and poor; but, I am sorry to add, is nearly eighty, so that we cannot hope to have him much longer; and we may have in his place some good-for-nothing supporter of Government. Oh, the poor Church! No wonder we do not

progress when our high places are filled by the minister of the day, with little regard to any but political motives. (I am as much opposed to the royal as to the papal supremacy.) My only hope is in the inherent life of the Church herself. Let them hack and oppress her as they please, she has something to rest on which they cannot overturn.

To the Same.

T.C.D., March 20, 1851.

Dr. F—— and I attended a meeting last evening to hear some addresses detailing the operations of the Irish society, established, in connection with the church, for the purpose of instructing the Celtic population of our western and southern counties, through the medium of the Irish language. This society (a voluntary one) has been at work for some years, and is now showing fruit; so that you need not be surprised (should you live many years longer) to hear of Ireland becoming anti-Roman, while England, or at least her aristocracy, are Romanizing. One of the speakers was the Rev. T. Moriarty, a most devoted clergyman, who has now a large congregation, the result of his labours for the fourteen or fifteen years that a wild mountainous district in Kerry has been under his care, which till then had not had a Protestant minister since the Reformation—nor was there a Protestant in the parish. Now, however, the scene is changed. At a recent confirmation held by the bishop, a hundred and forty were confirmed in one church, which has a congregation of over five hundred. The change in faith is exhibited in the greatly improved condition of the peasantry. I cannot enter into the long history, but may send it to you in print one of these days. Mr. Moriarty told us many anecdotes illustrating his *mode* of dealing with the people, and also of the magical effect which the Irish language has in reaching their hearts, clearly showing that it is a most important moral agent. One of his stories I shall try and relate :—

About two years ago, soon after the rebellion of 1848, Mr. Moriarty was travelling on the mail car from Killarney to Kenmare. They left Killarney in the evening. The road (a very picturesque one) winds among the mountains and through a very wild country, beautiful by day but gloomy enough by night. Going up the first hill, they overtook two country

fellows who seemed rather *groggy*. They had some wild talk with the driver; and, saying that they would be in Kenmare as soon as the car, they jumped over the fence and started off across the country. The car went on, and the circumstance was nearly forgotten, when, on ascending one of the long hills (it being now quite dark), the same two fellows jumped out again on the road, laughing and boasting that they were before the car. Up they mounted (*sans ceremonie*), and squeezed themselves in between the passengers. Immediately they became boisterous; singing rebellious songs and others, damning the Protestants and lauding the Pope, dealing in curses of the most fearful character—and all this in both English and Irish—till not only they, but the driver and all the passengers (Mr. Moriarty excepted) got wild with excitement, whooping and hallooing at the top of their voices. A pretty fix this for a Protestant minister, and one who had rendered himself obnoxious by his success in his anti-papal work! No doubt he felt rather uncomfortable, but had to make the best of it. At length a pause came in the singing and hooting, and he ventured to remark, "Well, boys, it is hardly fair to have all the singing on your side, and I ready to join," &c.—some such words to get a hearing. There was silence for a few minutes, and he then began to sing in Irish a translation of Heber's lines, "Thou art gone to the grave, but we will not deplore thee," &c. (which has been beautifully translated into Irish by Conellan), and this he sang to the exquisite old Irish air, "Savourneen Deelish." The effect was instantaneous. The rude and violent passions were quelled—the car was stopped—he had to sing it again—then to repeat the words slowly, and to end with expounding them. So, taking the song as his text, he preached to them on the side of the road, in the darkness, while they stood attentive and respectful listeners. During the remainder of the journey into Kenmare, he was the chief of the car. He had won their hearts completely, and this just after the violence which had preceded; so mercurial are the Irish—so powerful is language to raise or to quell their evil passions. I have given the anecdote very imperfectly. He told it with much graphic power, and entirely without self-laudation, and repeated for us the Irish words of the song, which, without understanding them, seemed full of feeling; and we

were not surprised at their effect. Mr. Moriarty is a native of Kerry, and is himself a convert. He is thorough master of the Irish character, and of the many avenues to the Celtic heart. At one moment he is full of wit and fun—in the next, touchingly pathetic; again, strongly persuasive and eloquent; and, by acute cross-questioning, he forces admissions which lead to conviction. When such gifts of nature are combined with devoted zeal and active benevolence, one cannot wonder at his success. A controversialist without bitterness—would that we had hundreds like him! Then we might snap our fingers at Cardinal W——, even with his red hat and his stockings to boot. While we have one such Irish clergyman (and there are many as devoted, though few so happily gifted), I shall not despair of the poor dear old Church of Ireland, bad as she is.

To the Same.

Trinity College, Dublin, May 22, 1851.

The Grays are in Paris, where they remain for another month, and then I hope to meet them in London, and at the Ipswich meeting of *notables*. Every one says the Exhibition is wonderful, and all the papers are full of it; and the Queen has not yet been murdered by the foreigners, &c., and none of the bad things predicted of it have come to pass; but on the contrary, everything is "merry as a marriage bell." But say the croakers, "Wait awhile. The ides of March are come, but not past."—"Very well, we will wait," say the anti-croakers. Your friend, the editor of the ——, has been writing some sad stuff about England, really such *gammon* that it is wonderful how he finds readers to swallow it. "Punch" has lately been giving a "special report" for his benefit, wherein all Mr. ——'s sayings are amusingly caricatured.

Some one has been puzzling folk at Plassey by writing that I am preparing for a flitting to the Western World, &c. You know I sometimes talk jestingly, but with just as much expectation of putting my design in practice as a child has who tells another "when the sky falls we will catch larks." Now say I, when Trinity College is turned over to the Pope, I intend to leave the old tub, but not till then, unless she tires of me, and turns me adrift.

As to the papal aggression debates, I am thoroughly sick of the subject. The country is much misinformed on the true state of the matter, and hardly knows what to be at. Our friends the Romanists are a compact little army, while we poor Anglicans are quarrelling among ourselves, when we ought to be facing the enemy. Still, if truth and justice be on our side, as I believe they are, our blunders and want of tact will be overruled in the end by the goodness of the cause. Lies are for a day: Truth for eternity. We have only to look forward for a sufficient length of time.

To Mrs. Gray.

Feast of Arthur de Wellington, 1851.

I am glad you are coming in August instead of July, although it is the time to meet numbers of tourists; but this cannot be helped. July is the worst month in the year for Killarney. There is generally good weather in August, and sometimes a stag-hunt on the lakes.

Three ladies to one gentleman is better than two to one.

I once took two ladies a travelling, and vowed I would never do so again, for one was always in dudgeon, it being impossible to be equally attentive to both on an Irish car, where we sit back to back.

If Asa will not give up sufficient time to the trip, say you will no longer call him Asa *dulcis*, but *Narthex*. But I hope better things.

To Miss Harvey, New York.

Liverpool, August 22, 1851.

I owe you one, two, three letters, or more; but you know I never like writing during vacation, for I get out of my regular routine; and no matter what fine things I may be seeing, the eye is filled and emptied again so fast that there is little time for penning down its observations.

Though I was a month in the neighbourhood of London I saw very little of the "Great Show," Kew being eight miles distant, and I could not always lay out my time (having business to get through) so as to be near it at a leisure moment; I

therefore gave up all thoughts of examining in detail the wonders it contained, and had to content myself with the "*grand tableau*," which is like a vision of fairy-land, or an "Arabian Night" scene. Some few things arrested my particular attention, and the result is a vivid impression on my retina of the *general effect*, with a detailed feature here and there, and a confused assemblage of images, like those that sometimes float in the brain between sleeping and waking, or in fever under the effects of opium.

I am glad to hear that you have seen Niagara, though your stay there was greatly too short for a full enjoyment of that glorious scene. As a waterfall it is indeed unequalled, and those who are disappointed in it are either unreasonable or unthinking. Yet I think Mrs. Jameson, the art-lady,[1] expresses disappointment. It must be from some defect of vision, or from a wish to be different from the rest of the world. On me the effect was very much as you describe. An overpowering feeling of awe at the display of quiet majesty—a feeling partly made up from the scene passing before my eyes, and partly from the thought that those waters had been rolling in the same manner unruffled, unmuddied, and undiminished for untold ages: that summer and winter, storm and sunshine made no difference more than as a passing shadow. These, and the thousand kindred thoughts which they suggested, have left an impression on my mind that I hope may last for my life-time.

To Dr. Robert Ball.

My dear Ball, T. C. D., November 13th, 1851.

The Neilgheri plants from Mr. Johnston are a very important addition to our Indian collection, and have interested me much. As yet I have only had time in a cursory way to run over the bundles; but I see a great many which we had not before, and the specimens are very well dried—remarkably so for tropical plants. Captain Munro happened to be with me when the plants came, and we went through them together, he recognizing many an old friend, which he had been the first to collect. We looked in vain, however, for the curious

[1] Author of "Memoirs of the Early Italian Painters," and other works.

Munronia Neilgherica, but that plant was collected by Captain Munro very far to the west side of the hills.

When you write to Mr. J—, I hope you will tell him how highly his donation is prized, and assure him that his plants are placed in a herbarium which is daily becoming more worthy of support as it enlarges. Since I saw you I have had a promise of Arctic plants from Captain Austen's late voyage.

Ever yours,

W. H. H.

To Mrs. Gray.

Trinity College, January 28, 1852.

H. has given me her letter to seal and forward, and bids me write "a L'Envoi" with it, which I should be glad to do if I had the wherewithal. Some sixteen years ago at the Cape, when seated at dinner by an interesting young *Dutchess* (I mean Dutch fraulein), the old one from the top of the table called out to her in Dutch (thinking I did not understand) "to talk to that bashful young man;" whereupon she answered—and the words have stuck in my throat ever since—"Was soll sagen," which being rendered into Christian language, means, "What shall I, what *can* I say to him?" But why rake up such an old story for you? I don't know, except that old age is garrulous; and you know the 5th of February is close at hand, and that I expect to hear news on that day which I can't shut my ears to if I would. I have no news to send you, or yarn in my brain to spin out, or if there be, the spider is lazy and will not spin, or the thread has caught on a hook and will not pull.

I have been *durch-schnitting* New Zealand Algæ for the last fortnight, and have to-day finished. There were 1541 specimens in all, but only some 200 species; no new genus, but several fine new species. What about *Graynelia?* it would be a much better word than *Nowodworskya*, the name of another American plant, just gone into Herbarium T. C. D. And now, my dear madam, I think I have sufficiently proved the poverty of my thoughts by the nonsense I have written. Love to *Asa*.

Ever yours affectionately,

W. H. H.

To the Same.

Trinity College, March 18, 1852.

While I think of it, let me ask you to give me some account of Margaret Fuller (Ossoli) if you knew her personally, or are acquainted with any persons who did. We have become much interested in her Life, which is just published here, and I find she came from near Cambridge; so probably you can tell us some personal traits or particulars that may serve to make the picture more life-like. Poor thing! What a miserable ending to her romantic life! The whole reminds me of a drama, where all the persons are cleared off the stage for a wind-up. Such ending often struck me as forced and unnatural, merely designed to harrow the feelings; but here is a real tragedy, as strange in its circumstances and complete in its parts as any ever invented.

I suppose that Agassiz has got the winter professorship at Charleston, by your saying that he is still there. It will be a nice arrangement, allowing him to explore the southern fauna at his ease. I should much like to have a copy of his Paper on Medusæ in the Academy Transactions, which he promised me and forgot to send. You know I look a little after beasts now and then, and I think there was much novelty in it.

I am encouraged by the promise of American sale for my proposed volume of plates, and should much like to be at work on them; but I must first finish the Smithsonian work and Dr. Hooker's New Zealand, which I fear will occupy most of my working time this season. I have just finished the 35th plate of "Nereis," and therefore have but *one* to do of Part 2nd; but I have not written a word yet or made a single description, and there are shoals of *Polysiphoniæ* and *Callithamniæ* to be microscopically examined. I hope to begin these on the 1st of April; a propitious day, truly!

You will wonder that I should take up a scheme of travels again, but I have long dreamed of a southern tour. It was the favourite dream of my boyhood, and the cause of my Cape journey, which ended indeed in disappointment, but left the wish for more travel behind. This comes up and fades away again at intervals; and perhaps the present furor may wear out too.

The Academy has got a new house, much larger and better than the old one; and besides this, the government are to build us a new library and museum, and to take the repairs of the new house on themselves for the future, so that all our funds now will go to scientific purposes. It was Lord Clarendon who got us this boon. I was always ashamed when taking a stranger up those shabby dark stairs at the Academy House, and generally took occasion apologetically to inform the visitor that the Duke of Wellington was supposed to have been born there. I wonder was he! The Academy has had the house since 1787.

To the Same.

April 6, 1852.

I have begun my lectures. This year I am giving a course on vegetable human food, and to day lectured on the potato. I work at "Nereis" every day from ten till two—which gets me on slowly. I write lectures three days, and idle three (as now, scribbling this), and before breakfast I lay out plants for gluing.

Gray will have heard with regret that poor Charles Lemann is lying in a hopeless state. He has offered his Herbarium (I am told), through B——, to Mr. Lowell, but does not think it will be taken on the terms. Do you know that the very many deaths of late years among our botanical friends, the breaking up of their Herbaria and sale of their labours as soon as they are buried, besides the rapidity with which their names pass away, have struck me forcibly, so much so, that were I working for *myself*, I should not be at the trouble of collecting and arranging, &c. Here, at Trinity College, Dublin, I sit like a turnspit roasting the meat, and when I am gone I suppose another dog will be put in my place. The Herbarium will not be broken up. I am content, for I seem to be working for some little purpose. I should just like to leave it in better order—to get through the arrears—and to return borrowed specimens. But I do not think *things in general* are worth the pains they cost. My views of personal fame are very different from what they were. I was reading a letter to day in the newspaper at breakfast from Mr. Hind, telling of the discovery of another new planet, and regretting that some cloudy weather had prevented him from seeing and finding it, *and many more*. Truly there be clouds

that hide many things from our knowledge. Do you ever think on starlight nights of what is going on up among the stars? and that you probably will be an actor one of these days in those far-off regions? And then, what is everything that is merely connected with the present life but a toy and a *pastime*. It seems so, and yet I am not sure that it is so, for I suppose that what appears to us in the works of nature as only *ornamental* has also its use, and likewise these seemingly trivial matters of this life may be intimately woven into our destiny in the life to come. A man turned of forty-one can hardly avoid thinking of these things sometimes.

To the Same.

Kilkenny, May 12, 1852.

You may wonder at the date of this letter if you ever heard of the place. *Asa* I am sure must have, as it is associated with the feline race for which he has so much partiality, "Kilkenny cats" being famous for their *dogged* resolution. Here am I living in the "house that Jack built," and giving lectures on botany to the natives. Two are over, and eight are to come, so that I have still a fortnight's residence before me.

And now I have to thank you for your interesting letter received the day before I left Dublin. The weather you describe must have been wretched; but I suppose ere this it has passed away, and spring has come with a hop, step, and jump, in regular "go-a-head fashion." Does it not burst suddenly over you? Here we have long been preparing, and are now in the very greenest and freshest season of the year.

Thanks for your report of Madame Ossoli. I am sorry you did not know her personally, though I can well understand that her ways may be much more pleasant on paper than they were in the original acting. The book as it stands is sufficiently freighted with transcendentalism; a sort of *ism* which (so far as I know) is much better to read of than to come in contact with. Her undoubted talents—her earnestness and her romantic history—give one, on reviewing her life, that toleration for her peculiar opinions which I can well suppose would not be felt while their utterer was living, by the majority with whose opinions they clashed. So few can appreciate the romance of life before the catastrophe throws a halo round the actors.

So you have seen Kossuth, though not yet heard him. Poor fellow, indeed!—shipwrecked, his work unaccomplished, with hopes that are only dreams, an untamed spirit, a consciousness of strength, and at the same time of impotence; with a reputation which may be either great or small, just as it comes to be appreciated. To be sure, while there is life there is hope, and he may now compare himself to Vasa or to Alfred in exile looking forward to the end, and no doubt this is what supports him, and this very endurance shows greatness of mind. I do not know what I wrote to you about ambition. At different times of my life I have thought very differently about it, and there was a time when it filled my mind pretty fully. But I have lived beyond this stage, and I dare say my altered feelings are due to finding myself entangled in shallows from which I am not likely to get free, a consciousness of having missed the tide and of inability to recover a lost opportunity. In the abstract I go with you; but abstract wishes and principles seldom operate on more than the dreaming faculty in our minds. Things are not to be accomplished by wishes or dreams; if they were, what a world one would create—(I do not mean for oneself in particular, for I could go on pleasantly enough through its bye-ways unknown)—but for the human race. My passion would not be so strong for political freedom as for setting reason free from the slavery of hereditary superstition. O'Connell talked much of "hereditary bondsmen," but did not help them much to throw off the bondage. Oh for some commanding and *fervid* mind to call us back to first principles! but who is sufficient for such a work? I know not any such. In my dreamland I often picture such a workman, and that is all.

To the Same.

Trinity College, Dublin, June 2.

Thanks for "Hungary," and for "Uncle Tom's Cabin," begun this evening; but I only give myself an hour a day at this season for such matters, and that is, while the evening kettle is coming to a boil, the tea being "masked," and afterwards drunk, so "Uncle Tom" may take several evenings. What a way to read an exciting story such as this promises to be! but I cannot help it, otherwise work would not get on.

I came home from Kilkenny last Friday, where I made some agreeable acquaintances, and spent three days very pleasantly at a fine old country-house in a park of 1200 acres, full of fine timber, &c. At Kilkenny is a curious old cathedral with a *round tower*, to the top of which I climbed by ladders, and plucked a saxifrage from the roof, which roof, although no bigger than an ordinary round table, bore a considerable fauna and flora on its flat.

Yesterday the submarine electric telegraph was successfully laid down between Holyhead and Howth, and a message sent across the Channel, and now a union is effected between England and Ireland of which Dan O'Connell little dreamed. Will they ever "pay out" a line under the Atlantic? I should not say 'tis impossible, but perhaps 'twould be easier to go round by Behring's Straights across Siberia. Would it not be a good plan in sending out future Arctic searching expeditions to give them a long electric line (a sort of *filum ariadneum*) which they could lay down as they went along, and so send back constant intelligence of their whereabouts? The idea is worth something.

To Mrs. Harvey, New York.

Trinity College, Dublin, June 24, 1852.

You will hear from Dr. Wainwright, I suppose, about the grand affair in London of the Jubilee. Bishops from all parts of Christendom, save Ireland, strange to say, though some of our spiritual lords must have been in London at the time. I have heard that one of your bishops (Michigan, I think) said it was worth travelling 3000 miles for the three hours spent in the Abbey on that occasion. It must indeed have been a touching sight. There were 800 communicants; the Archbishop of Canterbury with the Bishops of London and Michigan officiated at the table. What a hopeful fraternization between your Far West and our poor old weather-beaten church. May it be the beginning of a long series of mutual good offices. "Peace be within her walls, and plenteousness within her palaces,"—not plenteousness of silver and of gold, but of what California cannot buy—"the spirit of power and might—the spirit of knowledge and of the fear of the Lord." She will want it all in the im-

pending struggle with the powers of evil, from which struggle you also can hardly be free.

We have been reading "Uncle Tom's Cabin."

God speed the day when the light of truth shall break all fetters from the mind and body, and poor humanity walk erect without spancel or handcuff!

To Mrs. Gray.

Plassey, July, 1852.

"I likes small scraps of paper to write on, 'cause 'pears kinder easier to fill 'em." Dr. Hooker and I are up to mischief. We are off for Switzerland. There's a run! Probably not back till the end of September. I want to be more familiar with glaciers, having occasionally to lecture about them, &c. I go on Monday to Dublin, *en route* for London. Don't you envy us? It is very naughty of me, for the Smithsonian letter-press is not finished. But as Topsy says—"I knows I's wicked; heaps wickeder than other folks." I suppose Mrs. T. will write you her opinion of "Uncle Tom." I think I heard her say that it ought to be printed in letters of gold, and every one compelled to read it, or something to that effect. It is now in a very dilapidated state, from much reading. It has been printed in England, but in bad type, and so the American edition is in greater favour.

I have finished "Hungary," and have been much interested. I always disliked Austrians from the days of Cœur de Lion, but now more than ever. How can heaven and earth (the latter particularly) endure such tyranny from year to year? and it seems now fastened again on Europe by a renewal of lease since 1848. The French seem particularly pleased with the present régime, and while that is the case, no hope for Germany or Italy. *We* dare not interfere, much as we may individually sympathize with the cause of freedom in Europe, not only because of our debts—that is the least reason—but for fear of the Irish Roman Catholics. They are *our* difficulty as much as Blacky is yours. We both suffer under the effects of early injustice and wrong, and are eating the sour grapes that our fathers have planted. Well, fortunately, my paper is small, or I might run on to no good purpose.

To the Same.

Trinity College, October 21, 1852.

I find the days and nights too little for my work at present, having two folks pulling at me, and having to leave home again in a week, to give lectures in Clonmel, all which cuts up my time for gossip to a minimum.

I suppose you know we have been to Switzerland, and how we attempted to climb Mont Blanc, but came back next day from the Grand Mulets like drowned rats, beaten on every tack. Wind and weather assailed us, and we had to retreat. Our first misfortune occurred in crossing the glacier below the Mulets. Here you know the ice is very much crevassed, and the traject is made by many zigzags along narrow ridges of ice, and by jumping ice-ditches, or crossing them on ladders. We were well in the middle of this work, when we had a storm of thunder, lightning, and hail, after which time *fine* moments were the exception, stormy ones the *rule*. We continued, however, to advance to the Mulets (at 11,000 feet). These you know are a rather steep ridge of tall black rocks standing in the middle of the glacier. Here were our quarters for the night, on a shelf just big enough to hold the four of us, with a wet blanket to sit on, and an old tablecloth stretched over our heads. Above was the cold sky, from which we were favoured with rain, hail, snow, and vapour at various intervals during the night. When morning rose, we found nothing but dense clouds in every direction, and as we could not go on, we were forced to go back. Hardly had we set out when the cloud changed to heavy rain, unabated during the whole of our way back to Chamounix. So much for all I shall probably ever see of Mont Blanc. Our party were Hooker, Thomson, J. P., and W. H. H.

Of course we left Chamounix next morning, route by Martigny, Vevey, Berne, Thun, to Interlacken, where we left the two ladies, and set off for a fortnight of walking. From Lauterbrunnen we crossed the Ischingel glacier to Kandersteg—a glorious walk, but rather fatiguing, it being one of fourteen hours, four of which were in heavy snow, and two others on a moraine of loose sharp stones. But the scenery repaid the toil. Then by the Gemmi to Leuk, and so on to Zermatt at the foot

of Monte Rosa. Here we stayed some days glacier-walking; left it by the Weiss Thor for Macugnaga. I am sure *you* did not pass the Weiss Thor. We had to descend all but a precipice from 12,000 feet to 4000 (the level of the valley), a most monkey-and-cat proceeding. In one place we had literally to hold on by hands and toes, with our faces to the wall, and nothing visible below save a cliff going sheer down into a white misty vapour, which steamed up from the valley. Fortunately there was no wind. The descent was partly by rocky precipices and partly by steep snow banks. Neither Hooker nor Thomson had seen such a place in all their travels, and certainly there was nothing on Mont Blanc so disturbing to the head. We crossed the Moro in a fog, and so back to Visp, and up the valley to the Grimsel, where I remembered the album you spoke of, and saw the mosses, &c., and Agassiz's writing. Hence to Interlacken, Lucerne, &c., and down the Rhine. We stopped at Wiesbaden to attend the German scientific meeting, and the ladies read Longfellow at Heidelberg under an umbrella. Then Cologne, Brussels, and the Belgian cities, and very glad to get back to Kew. So much for our travels.

Arrived in London, I found the city given up to *two* vanities. Every book and printseller's windows were filled with "Uncle Tom" and the Duke of Wellington! The former has had a rage equal to that of Jenny Lind. When I left home there was only a single cheap edition to be had, and that in but few places. On my return there were at least a dozen, ranging from sixpence to ten shillings, and selling everywhere by hundreds of thousands. The music shops had "New Songs from Uncle Tom," with lithographs of Eliza on the ice, &c., and the minor theatres were acting a play called "Uncle Tom." This week "Punch" has got Mr. Disraeli in the character of Topsy playing mischievous pranks. So there is *fame* for you. And now I have promised so many persons to find out about the authoress, that I shall feel obliged if you will tell me something of her, and if you send her *autograph* it will be all the better.

To. Mrs Harvey, New York.

Trinity College, February 10, 1853.

I have been very quietly busy since Christmas, when I was at Plassey, with the daily round of college life. Now

that *Lent* has begun, I suppose there will be more parties, as many of our people seem, for opposition sake, to give loose reins to their hospitality when they ought to be fasting. As for me, I reconcile it to myself thus. It is always a penance to me to have to go to a party, so if I am obliged to go out at all, better in Lent than at another time. Would your new bishop approve of this casuistry?

I think the fashion of Romanising (or Romancing) is less among us now than it was some time ago, which may be attributed to the folly and violence of the Roman Catholic party. The case of the Madiai has also had its effect.

The strongest allies the Romanists have with us appear to me to be the Low Church party, who cry down every adherence to the old practice of our church in her best time as popish, and who are trying to get our only safeguard—the Prayer Book—mutilated. This party within our own city are really playing into the Pope's hands, under the pretence of greater spirituality. I hope they are losing ground with the young generation. In England they certainly are. In Ireland not so clearly. It is strange that laxity in practice should come to be interpreted as spirituality of mind. But so it is. Any one who endeavours to walk as the church of which he is a member directs him to do, is called a Puseyite or a Jesuit, while the dissenting churchman, who holds half the church's doctrines in an unnatural sense, and neglects her forms as worthless, is "Evangelical," the only true interpreter of the Gospel. "Antinomian" is a truer name, but it would not sound so well.

We have dreadful floods all over the country. To-day I plucked the first open leaves of the scarlet currant (*Ribes sanguineum*). All the buds burst, but no flowers as yet on this tree. The snowdrops and crocuses in plenty.

I talk of going to India, Australia, and home *viâ* Panama and New York.

To Mrs. Gray.

Trinity College, June 30, 1853.

You truly say my time for sailing is near at hand. I expect to leave this in less than a week for London, where I may have a month of delay before starting. I hope to let you hear now and then of my proceedings by a direct letter, and at other

times through Mrs. T., who will be my principal correspondent. And now let me thank you for your thoughtfulness in providing me with a nice flexible limp Prayer Book, very fit for the pocket, and I hope to be kept there for convenient use in the bush, on the sea, on some rocky crag of the coast, or on the snowy range in New South Wales, perhaps at the diggings. It was very good of you to think of this. It will at least insure your being in my mind at its best seasons, when it is most open, and consequently most fitted for remembrance. I shall also take my own old book, the companion of my rambles for seventeen years, and the gift of a dear old friend also.

Mr. Ward and two of his daughters have been to Ireland to see us, and are now at Plymouth on their return. He is travelling for his health, and came to Ireland chiefly to see me before I should set out on my travels. My passage is taken on board the Ripon to Alexandria, and by another steamer to Ceylon, my first stopping-place.

CHAPTER XII.

VOYAGE TO THE SOUTHERN HEMISPHERE—OVERLAND ROUTE TO INDIA—CEYLON.

In August, 1853, Dr. Harvey, with the approval and encouragement of the Board of Trinity College, set out on that voyage to the South Sea Islands which had been from his boyhood the subject of his dreams and wishes. He could not look forward now with the fearless, joyous anticipation of his boyish days, for time and the vicissitudes of life had told, in a more than ordinary degree, upon his peculiarly sensitive temperament; but he still retained sufficient elasticity of spirit, as well as mental and bodily vigour, to render this long-desired survey of the Southern Hemisphere a very delightful prospect. But he did not now undertake it so much for personal gratification, as with the hope of enriching by his researches the Algological department of the College Herbarium.

The particulars of this extended voyage and travel are, like those of his American tour, to be found in the letters to his sister, which form as before a pretty complete journal. It had been his intention, at his return home, to have revised them for publication; but his failing energy, increased botanical engagements, and more especially, his distrust as to their favourable reception with the public, led him to abandon the idea. The editor will now endeavour to confine her extracts to such parts as appear desirable from their bearing on Dr. Harvey's character, regard being had at the same time to the incidents and objects which seem best calculated to render the narrative interesting. His first letter bears date 10th of August, and is written on board the Mediterranean steamer after having landed at Gibraltar, where he and his party explored the places usually

attractive to strangers. When climbing the rock, Dr. Harvey's observation was of course directed to the vegetation. He saw a small tuft of maiden-hair fern (*Adiantum capillus*) springing out of a dry rock by the road side, and at once concluded that at another season there must be plenty of water trickling through the limestone; and a few other dried-up mosses and ferns told him a similar story. The Poke tree appears to have especially interested him. He writes: "After climbing some way, we reached the guard-house, where I was struck by a novel-looking tree thirty or forty feet high, with a trunk as thick as my body, and well covered with leaves. When at a little distance, seeing pendant green blossoms, I took it for a Spanish chesnut, but on coming closer I was utterly astonished to find it a *Phytolacca*, or 'Poke.' Perhaps the 'Virginian Poke' may be seen in College gardens, a small vulgar-looking weedy thing, like a large *Chenopodium* more than anything else, and that was my preconceived notion of 'one of the family.' But the Gibraltar Poke is a very beautiful and thickly-leaved shady tree, with no trace of herbaceous matter about its branches. I had known there was an arborescent species here, but little expected to see it on such a grand scale. Had it not been in blossom, I should not have recognized it. It is common on the rock everywhere about."

It was on a Sunday morning that the steamer touched at Malta, where she remained till "sundown," but uncertainty as to her stay forbade more than a few hours being spent on shore, nor did the party venture to stop for service. They had time, however, to take a short peep at both churches, the "grand old Cathedral of the Knights," and the "beautiful little church built by Queen Adelaide for the English residents." After a quarter of an hour spent in the cathedral, where high mass was being performed, with the full ceremonial of dress, incense &c., "it was pleasant," Dr. Harvey writes, "to go for a few minutes into the English church (before the people had assembled), and to contrast its meek adorning—"not braiding the hair or putting on of apparel," &c.—with the flaunting draperies and perfumes of the rival faith. I hope they may have faithful teachers, men true to their vows, neither favouring laxity on the one hand, nor formality on the other. There seemed room to accommodate 600 persons. They have a sweet peal of bells that ring out a

real English chime, which was pleasant to hear among the louder and prouder bells from the other church towers." After mentioning the fortifications, his letter proceeds: "One use of the walls is to grow caper bushes, which were springing fresh and green wherever there was a crack. The caper bush at a distance looks like a stout convolvulus, as its stems trail about in every direction over the stones. Seen closer, however, it is more woody and thorny, and rambling as a bramble. It has small, simple, deep green glossy leaves and yellowish white flowers with a great many long stamens, and the pistil raised on a stalk in the middle, as in the passion-flower. The flower bud before opening is the part pickled. You might collect plenty on all the rocks and walls around Valetta, that is, if you be allowed to *cut capers* within the fort. The prettiest tree or rather large shrub that I saw about the town was what is called the *pepper bush*, which you can see as a poor potted plant in College gardens, but which here is a most gracefully *weeping-tree-bush* some twenty feet high, with more the aspect of one of the Australian acacias than anything else. It was planted on some of the terraces with *Melia* (Pride of China) and *Ailanthus* (Tree of Heaven), and looked well.

"When we returned on board we found 150 deck passengers, Arabs bound for Mecca, a strange, wild-looking set of men, swarthy, bony, bearded—dressed in long loose flannels, like night-shirts, falling down to their heels. What a change is coming over the world when pilgrims from Sahara to Mecca travel in an English steamer. They would not be the worse for a regular *steaming*, seeing they are rather dirty. Many are pilgrims on their own account, others are *proxies*, who have hired themselves to carry their neighbours' sins to the tomb of the Prophet, and to bring back from it a bottle of the holy water in which whoever is washed at dying is sure of a safe passage to Heaven."

On board the Bentinck, August 21, 1853.

On the Red Sea, a few hours from Suez, and near the place where the Israelites crossed—*as is supposed.*

. . . . . I am very comfortably enjoying a pleasant cool breeze blowing over the *dark-blue* waters of the Red Sea; at one side, about six or eight miles off, the high, bare, red, barren, African mountains looking as if they were half roasted. At

daybreak on the 18th we cast anchor in the noble harbour of Alexandria. On landing we hired a carriage and drove first to Pompey's Pillar, which stands on a small hill a short way from the town, and, to say the least of it, "wears well." Fancy a tall red granite column, the base ornamented with English snob tourists' names; we did not inscribe ours. The road to it is bordered with acacias and *Chenopodium* trees, and we passed gardens with thousands of dates in fruit and oleanders in flower: then we wheeled about and were off for Cleopatra's Needle, erected on the bastions fronting the sea, at the opposite end of the city. It is an obelisk of no great size, having the hieroglyphics on the sides toward the sea perfect and sharp, while those facing the sandy desert are worn, and many of them nearly effaced.

All the long day we were tugged through the canal, and just as the sun went down we reached its junction with the river of Egypt. As the sun set, the full moon rose before us on the broad waters of the Nile; the sky was beautifully clear, the region round the sinking sun at first *apricot* yellow, and then of the intense orange yellow of the deepest coloured *Escholtzia*. This faded upwards through a rosy purple into the grayish blue of the evening sky, all very lovely.

My eyes have now become as familiar with the date palm as with the hawthorn or the sloe. Moore has quite mistaken its character where he mentions—

> "Groups of lovely date trees *bending*
> Languidly their leaf-crowned *heads*."[1]

For "lovely," read "lordly;" and the *head* of the tree does not bend, it is the fruit-stalks that bend; the trunk is remarkably stiff, erect, and as *languid* as Nelson's or Pompey's Pillar.

As soon as the dawn began I came on deck to see the sun rise and to watch the river banks, which though flat were not monotonous, for there was always something to look at, groups of date trees, mud villages, farmers irrigating their land, &c.

I have said little about the people. There is a great variety of race among them, and an extraordinary number of one-eyed men, it being a common practice with mothers to put out the right eye of their male children after birth, in order to prevent

[1] See "Paradise and the Peri."

them from serving as compulsory soldiers in the Pacha's armies; a specimen of the paternal government, but not worse in principle than our pressgangs. I thought of the one-eyed calenders in the "Arabian Nights."

As the day went on all eyes were of course bent in the direction of the Pyramids, which we saw at some ten or twelve miles distance, very faint in colour, but sharply defined against the sky, and looking quite as gigantic at this distance as they afterwards appeared when much nearer.

Passing over the notice of Cairo, Dr. Harvey leaves that city "about half-past eight in the evening, under a bright full moon," in a van holding six passengers, with a convoy of four accompanying ones. Huge prickly pear hedges, date trees, &c., lined the road for the first stage, after which all cultivation ceased, and they entered on the stony or sandy flats of the desert. Here they soon overtook the caravan of camels with the luggage, "a long line of patient burden-bearers tied together, and following with measured tread in single file." The night cool and pleasant. They stopped for refreshment every four hours, when he found a cup of hot tea a complete preventive of thirst.

"There is little," he writes, "to be seen in the desert but the 'riddlings of creation' (quoting Burns), and a few stunted shrubs, or a tree at long intervals, and all along the road-side the skeletons of hundreds of camels that have died there. The Arabs will not *kill* the dying camel, but when he falls down and will not rise again, he is unladen, his burden distributed to the others, and the poor brute left to die of hunger and thirst. After day-break we passed one of these unfortunates, still alive, but with a great hole in one side, from which on our approach two ravens flew up, and there were several vultures perched at a little distance waiting for their meal. They do not touch him while life lasts, but quickly strip the carrion from the bones. It was pitiable to see the poor animal slowly turning his head and watching our movements at we passed by. I thought of Mrs. Hemans's lines, 'They are gone, they are all passed by;' but perhaps the poor brute is ignorant of his fate, and yet I hardly think it. The only other living things we passed were three gazelles, that stood and stared at us from a short distance, and then moved slowly away over the hot stones.

You could see nothing for them to eat, but no doubt they find pasture."

After eighteen hours of desert journeying, the travellers reached Suez, where, in the cool of the evening, at low water, Dr. Harvey took a stroll on the yellow sands of the sea-shore. Scooping up some handfuls of shelly sand, he found it to contain numerous small shells, but chiefly of one species, *Cerithium*. No seaweeds were visible on the beach. He gladly left the scorching heat of Suez to embark on the Red Sea for Aden, with the singular appearance of which he was much struck. "Fancy," he says, "an isolated group of extinct craters, their mountain-sides all peaked, and cleft, and air-worn, with scarcely a green thing to cover their cindery faces; the group traversed by excellent roads, and inhabited by hundreds of black and half-naked Arabs and Africans; the town in the bottom of a crater, the sides of which, all round, form a fortress nearly as strong as Gibraltar. All this placed under a fierce sky, and rarely visited by raindrops, the water nevertheless (little as it is) not badly tasted."

Even in a spot so unpromising, a search for plants was not forgotten. They landed two hours before dark, and while his companions were choosing horses and "dilly-dallying," he "strolled off for half an hour behind the hotel, and picked up a tolerable bundle of plants, among which were several curious forms of the caper family, and a handsome shrub called *Cadaba*." He then joined his companions in a ride along the sea-shore, passing through a defile on the way, where, near the entrance to a fortress, some Arabs sat with pitchers of dirty and tepid water. He says, "My friend and I gladly paid them threepence for a drink, our throats being dry and our palates unsqueamish. It was about as muddy as if taken from a roadside pool, but we swallowed our dignity and mother earth with it. Our ride home was in the dark, save the brilliant stars of Arabia overhead. I slept on shore (not much sleep from noise, heat, and lying in an open verandah lobby), and at daybreak set out to look for more botanising. I got little except on the seashore, where I picked up *Padina pavonia*, an *Ectocarpus*, and a few shells. But I must," he ends, "cry a truce to Aden, as the world has since been moving too quickly, while my letter lags behind."

From Aden Dr. Harvey sailed for Point de Galle, Ceylon, where he landed on the 5th of September, and was welcomed with hearty kindness and attention by Dr. Kelaart, to whom he had been furnished with a letter of introduction.

In a country drive of eight miles with this gentleman on the evening of his arrival, he made his first acquaintance with the tropical scenery of this beautiful island; and his delight was little exceeded by that which he had experienced on his first landing at Cape Town. "How I longed," he writes, "for Mr. Ward, as we drove for miles through one vast 'Ward's case' of cocoa-nut, areca, and other palms, ferns without end, and very many noble tropical shrubs in blossom. *Plumerias* as large as apple-trees, *Allamanda cuthartica* in the roadside hedges, *Musænda*, looking like trees covered with milk-white butterflies, &c. I can give you but a mere shadow of what seemed to me a paradisaical jungle. I suppose in a week I may think differently, for Dr. K. sat by me *quietly* while I was ecstatically looking out of one window or the other. The first part of the drive we entered a cocoa-nut forest. Thousands of this lovely palm-tree at all ages, their trunks bending in every direction; the great leaves of the young and vigorous ones, and the smaller crowns of the old, showing the 'rise and fall' of vegetable life very strikingly. The large drooping plumes of the *Caryota* look like those on hearses, if one can fancy them magnified for a giant's use. It would make a superb colonnade for a cemetery. The evening fell, and on our return, as we drove along in the darkness, the air was sparkling with fireflies.

I rose early the next morning, and crossed the harbour in a canoe, over high ground-swells, very pleasant to ride over, as the boat sat like a cork on them, bolt upright. When we landed, I and my servant started up a narrow pathway through the jungle, full of wild flowers and shrubs, and shaded by numerous screw-pines. After some time we got to the seaside of the point, and I went down on the rocks to pick. It was just possible, by running in and out at the retreat and advance of every wave, to pick a bagful of Algæ, while showers of spray were giving me a pleasant bath.

I sail from this on the 7th, for Trincomalee. I now think I shall stay three months at Ceylon, and give up Singapore and Borneo, because, from what I see here, I know that were I to

go to the latter, I should never be able to turn away from it for Australia.

Trincomalee, September 14.

We reached this on the 11th; a pretty place, but not without some faults; very few Algæ, and these of the commonest kinds. No boats for hire but rickety canoes, from which you cannot dredge, or else great cargo-boats like lighters—added to which, it is pretty hot under a vertical sun—so I suffer somewhat from compulsory idleness. However, having a plant collector engaged, I mean to stay here for a few days, and send him, with a coolie to carry his gatherings, into the jungle to collect flowering plants. I feel that I have not physical strength to accompany him, as I cannot bear the sun after eight o'clock in the morning. Except this lassitude, I am quite well, never having had a headache since I left England. I live regularly and carefully, but I shall not be sorry when I get into cooler air. Catch me at Trincomalee again! I hope to address my next letter from Peradenia, Mr. Thwaites's garden, in the high country, which is cool and pleasant. I shall be quite at home with him; but even here I do not feel lonesome, only *disappointed* at my own inefficiency, and vexed that I shall cause disappointment to my friends at home. What will they say if I carry a dredge all round the world, and never once throw it into a fishing-ground! What a donkey it is!

Matelie, sixteen miles from Kandy, September 23rd.

After staying some days at Trincomalee without finding any prospect of making profitable collections, I set about seeking a mode of exit. My friend, Captain Higgs, offered me an old sea cot and a bamboo to sling it on. I had myself a small mattress. I bought a palm-leaf mat for an awning, and thus equipped, called the affair a "Palanquin;" and hired twelve bearers to carry it and me to Kandy, and four coolies to carry my luggage. So, with sixteen men in pay, I left on the 19th, and arrived at my present quarters this morning. To-morrow I have every hope of reaching Peradenia, the whole distance of six days' journey being no more than from Dublin to Limerick.

I cannot help feeling, as I lie on my back, slung on a pole, that it is a sort of cruelty to animals to be borne along, the

bearers emitting sounds like groans, or encouraging one another, or hum-drumming each of these to a different tune. The most soothing one is "Hoven Horen, Hooven Hayven," repeated again and again. Another is like "No fool lazy, no fool lazy." The encouraging cries are "Ho tambe," "Harra pungee."

This being the end of the dry season, the smaller plants burnt up, and the shrubs flagged with heat or wholly shrivelled, the road offers few interesting details to the botanist. The soil is a granite sand, rough to the foot and barren to the eye. Daylight begins a little before six, and then the woods were full of chirping and whistling birds, one crying "Pocock, pocock," vociferously. Here and there regiments of ants were crossing the road in dense continuous lines, and every few yards we passed the great clay hillocks made by them. Other species had huge leafy nests, like those of wasps, hung in the trees, while another had theirs of leaves glued together at the edges. I don't know how many species I noticed, but scarcely a bush, tree, stone, or spot of earth was free from some kind or another. One tree species is large, red, and very fierce. The most remarkable tree I observed was the parasitic fig, which drops its seeds on the trunk of another tree, and these send down roots all round it and up it, till at last the whole tree is clasped round by the parasite (or epiphyte), which then grows to a huge size, and might pass for a small banyan. Coming to a small river, I had a delicious bath, drinking the water and washing myself at the same time. At noon the bearers chose to proceed, though the sun was intensely hot. I wrapped my head in a towel and my body in a Scotch plaid, and thus lying in my cot, was borne along the hot road. Soon, however, we again entered the forest, and I could peep out and see what was passing. This was the hour for butterflies, which were flying through the glades by thousands, white, brown, blue, and spotted. Wherever a part of the road was a little moist, it was thickly covered with them, so thick, as almost to touch each other for yards together; and I noticed that where several kinds were thus sucking the moisture, they kept in distinct troops, not mixing together.

The shrubs in flower were, chiefly, a few kinds of cassia, one of which looked like a laburnum, acacia, and *Ixora coccinea*, whose scarlet clusters of stars abounded along the whole way.

Species of *Carissa*, like jessamine, were also very common. I gathered *Gærtnera* and a few others, but my roadside pickings are not of much value. Sunset brought us to Candelay, being twenty-five and a half miles the first day. As I had just light on arrival at the rest-house, I ran over the hill to get a view of the lake, which was shining in golden light. It is pretty, being surrounded by softly-wooded hills. A troop of cranes (real ones, not herons) were standing in the water, and flew up as I approached.

We started next morning by the light of the moon and a torch ("chule"), the latter carried, not so much for the light it gave, as for a fancied protection from elephants and bears, which abound in these forests, and which my coolies expected to see start from every bush. We went in single file, the torch-bearer preceding us, and dashing fire on the ground every now and again. We saw no elephants, but heard them roaring in the tanks, and passed their traces repeatedly. Of these there could be no mistake, the great foot-prints marking the road distinctly in regular file. A little later there was a great rustle and crash among the bushes, and the coolies said it was "Elepan." The largest beast I saw, however, was a great monkey or ape with white whiskers, several of which were leaping from tree to tree, and making a great noise. Plenty of jungle fowl, pigeons of many kinds, green and blue-plumaged birds unknown to me, and now and then a hawk or a kite were seen. At any other than this sultry season, no doubt much more of both animal and vegetable life would have been abroad, but in some places there had not been rain for four or five months.

On the evening of the 20th we got to Galeaga, forty-six miles of our route. About three miles short of this place we were overtaken by a thunder-storm, with heavy rain, much noise and vivid lightning; and as I thought it better to walk with my umbrella than lie in bed to be rained on, I started off from the bearers, and had a quick, invigorating, delightful walk through the rain for the rest of the stage, which I enjoyed as a young duck would have done, the previous heat had been so overpowering.

Next day I pursued my journey; and after having proceeded about ten miles, I had a walk to enjoy a bath, not in a clear

stream, but in a muddy patch of water, to which bullocks in hundreds resorted. It was full of small fish, which came about me and tickled me, trying to bite. Similar tame fishes flocked round me by hundreds in the small rivers where I bathed. Our resting-place for that night was Damboul, seventy miles from Trincomalee, where I remained half a day, for the purpose of visiting some famous rock temples, said to be two thousand years old, and probably built by an earlier race of Cingalese than the feeble people that now claim them. We started in the cool of the morning, as the rest-house keeper told me there would be *mass* at seven o'clock. "What," said I, "surely they are not Roman Catholics?" "Oh, no, sir," said he, "it is a Buddhist mass." I hired a guide, and set forth. After a short way, we turned from the road into a shady path, to ask permission from a priest. His house was well set up, with a grove of cocoa-nuts and a planted garden round it. No doubt his reverence is in good case. He was dressed in the usual yellow robe, and graciously allowed us to proceed. We then began to ascend the naked face of a steep granite rock; and, after mounting some way, entered a gully, through which steps had been cut. This brought us out on a platform of rock, where *Plumerias* had been planted for ornament, but they looked rather dry, and here we entered the enclosure of the temple. These temples are not buildings, but cavernous excavations near the summit of the rock. It seemed to me as though advantage had been taken of some natural hollow, which had been cut deeper, the front being closed up by a wall. There are five of these hollowed in the rock. To describe one describes all. You enter a low door in the front wall, and find yourself in a dimly lighted cavern, of no great height, but of considerable area. A few windows having been opened, you see that there are images, some small and some of colossean dimensions, ranged all round, with curtains hanging before them, and painted canvas ornamented with thousands of pictures of similar deities stretched over the roof. One colossal figure, thirty to forty feet long (or perhaps more), was lying on its side in each of the temples. Other figures were in high-crowned caps, some of which we were told were "kings;" others, "gods," were standing erect, but the most numerous figures—amounting to *hundreds*—were sitting crosslegged on stools, or thrones, or chairs,

round the temple, leaving a broad passage or aisle behind them. These were all images of Buddha, and were distinguished from the others by each having on his head the representation of a *flame* (like the "cloven tongues as of fire" that sat on the apostles). You know that the Buddha is a sort of spirit, which comes down from generation to generation on different individuals, converting them for the time into a sort of incarnate God—whence, I suppose, the multiplication of images. And as there is some truth, perhaps, lying hid under every superstition, we have here a recognition, running back into times long preceding the Christian era, of a sensible revelation from the Deity to mankind. Of this the flame on the head seems a fitting emblem. The universal expression of the faces of these Buddhas was melancholy and devotional. The images were all painted bright yellow. Some were of solid rock hewn out of the mountain, but the greater portion were built of brick and mortar. The place is kept in perfect repair. We did not witness the mass, which I regretted; but in one of the temples the perfume of incense remaining from the last celebration was very obvious. On the face of the rock outside, the guide pointed to a long writing, deeply and sharply cut in some old characters not now known, which no doubt gives an account of the temples. Dr. Hincks would have taken a rubbing, which I did not, being unprepared therefor.

After leaving Damboul, the road became much more open. Here two species, one shrubby, the other tree-like, of *Cactoid Euphorbias*, which I had seen previously here and there, became so abundant as to be very striking objects. The largest of these we cultivate at Glasnevin; but here were trees of it forty feet high at least. I walked through them to enjoy the novel aspect of such enormous succulents. On this hill, under a blazing sun, and growing on dry shrubs, I found the only epiphyte in flower which I saw on my whole route. It was a yellow *Epidendrum* with spotted stems. Rain had not fallen for nearly five months, yet this plant was in flower. Its roots did not cling to the shrubs, but hung loosely in the air, and looked dried up to half their diameter, but were yet alive at the core. I found only one other orchid.

Peradenia, September 24.

I have just arrived here, and am in Mr. Thwaites' comfortable house, but have nearly forgotten the thread of my story in seeing him, and feeling that the mail will close in half an hour. From Matelie to this place the country is utterly different and most beautiful—a perfect paradise of wooded hills, open valleys with rich vegetation, and glorious forms of tropical plants. The road for part of the way led through coffee plantations, now laden with ripe berries—not handsome at this season. Here and there were wild spots—the ground covered with ferns—*Aspl. nidus* sitting on old trees, and great store of flowers, &c., &c. One old tree was quite covered with an epiphyte orchis. There was Indian shot, and several others of the same family — balsams, small passion-flowers, and lots of other creepers—a *red* "blackberry," which I ate, and found insipid. Palms again abundant—the cocoa, Areca, Caryota, &c., &c. I was lost among the new and strange forms. I shall write a description of Peradenia when I know it better. At present I am only conscious of having driven through an avenue of tropical plants, and seen other avenues spreading on all sides through fields, and parks, and lawns, with a border of hills like the happy valley of Rasselas.

September 28.

I have been received by Mr. Thwaites with the most brotherly kindness. Were I at Plassey I could not find myself more at home.

Now for Peradenia.—A botanic garden under the line is very unlike Glasnevin, for there are no hothouses, and what is more wanted is a *cool*-house. The grounds cover 140 acres, surrounded on three sides by the river; and beyond the river are wooded hills rising one behind the other, and indeed the distant ones may be called mountains. There are valleys and vistas between the hills, and lovely peeps up and down them. There is a satin-wood bridge of one light openwork arch thrown across the river near the entrance to the garden, the grounds of which are diversified like those of Glasnevin on a large scale. Mr. Thwaites's house is built on one of the small hills, "in the midst of the garden"—a pretty little verandah cottage, with flowers and climbers in front. At the entrance of the garden

is a fine group of palms, of which the famous "Talipot" is the grandest. Beds of yuccas are at either side, together with enormous *Uranias* (travellers'-tree), which have acquired large trunks by age, and resemble great fans of peacocks' feathers —such as are carried before the Pope on grand holidays. When the sheath of a young leaf is pierced, out gushes a stream of very good water, whence the name of "travellers'-tree." The garden is very well kept for a tropical one, where weeds grow so rapidly. Thwaites pointed out several large trees, over twenty feet high, which he had planted as seeds only three years ago. Weeds here are frequently shrubs or trees which must be uprooted. The Caryota palm is a very *troublesome weed* in the garden. It bears a profusion of berries, which are scattered about by squirrels and birds, and spring up everywhere. The beautiful *Thunbergia*, which we prize as a hothouse plant, is here a most troublesome weed, clasping small things like our wild convolvulus. Apple-trees grow here like raspberry bushes, only clusters of suckers from root buds—neither branch nor stem. In this state they live, but make leaves only. Few of the fuchsias can be cultivated. The *corymbiflora* grows the best, but can only be forced into flower by destroying its leaf-buds; yet China roses do very well: Sweetbriar keeps its scent, but rarely blossoms. Violets will not do here, but grow in colder places. The chocolate trees are laden with fruit, and so are the nutmegs. Bread-fruit we have daily at table. The oranges are *green* when ripe, sweet, and well-flavoured, and better than those we get in Ireland.

October 6th.

On the 29th ult. Mr. Thwaites and I set off for Pallagalla, forty miles from this, the estate of Mr. Wall, a coffee-planter in the high country. We were out in all six days, one spent in carriage journey, two at Pallagalla, and three returning on foot. The weather prevented our proceeding to Newera Ellia, as we had intended on setting out. My visit to Ceylon has been completely ill timed. The weather is now quite broken. I should have arrived in December and stayed till March. But 'tis a folly to fret; so for our ride to Mr. Wall's.

The roadside was often rocky, the rocks in wet places covered with ferns, of which the most beautiful was *Blechnum orientale*,

with pinnate leaves six or seven feet long, the young ones pink or crimson, changing to pale glossy green. We passed through the village of Gampola, a coffee centre, in a basin surrounded by hills covered with coffee plantations. From this village the road rises for ten miles in inclined planes up the sides of the hills, in one continued but gradual ascent, the plants changing with the elevation.

Ferns now abound, and tall *lemon-scented* grass, its flowering stems six or eight feet high overhanging the road. *Brugmansia arborea* is a common hedge-weed, and very troublesome. *Gloriosa superba* was common, in splendid blossom; how unlike the pale-faced apology that graced my conversazione. Here its colours are crimson, orange, and gold, in their strongest tints, and its blossoms peer out of the roadside brambles.

As we advanced on our way flowers abounded more and more. Every wet rock was gay with purple or white balsams, of which there are many beautiful kinds. The *Didymocarpus* is a very pretty little plant, and the *Klugia* a great beauty, with racemes of brilliant cobalt flowers. We passed several large waterfalls, any one of them sufficient to make the fortune of a Swiss valley. Here they only obtain a casual notice.

As we proceeded, the general aspect of the view ceased to be tropical, and reminded me more of Devonshire scenery. The next two days we spent in the jungle, and botanised, making Pallagalla our head-quarters, but we found little of much value. We saw noble tree-ferns, twenty to thirty feet high, and thousands of smaller ones carpeting and festooning every spot in the thick dark jungle. Rain setting in, we encamped for a day and night at another coffee-planter's, where we were hospitably entertained. His plantations extend to 1000 acres, including different places. Here the plantations are bordered with rose hedges. It being Sunday, we met several planters at Mr. R.'s house; their talk not very edifying. Next day we started for a walk of seven miles to the house of another planter; our coolies, ten or twelve in train, carrying our luggage and plants. We ascended a steep mountain pass, through dense jungle, where were plenty of land leeches, and, as I stopped to pick some off my gaiters, I said, "Well, they are not much trouble after all," when looking at my wrist, there was a great leech sucking his fill; this was the only bite I got. I must

admit these leeches are annoying; you cannot stand a moment on the grass without seeing a troop of them coming towards you from every side. Fast they come, and are soon up your legs if you are without gaiters, and they are always hungry. The naked legs and feet of our coolies were streaming with blood. They abound everywhere in the grass and dead leaves, nor can you, when walking in the garden, leave the gravel without being attacked. We slept at Mr. P.'s house; and Mr. Thwaites's carriage met us next day within eight miles of home, where we arrived safe and well. I never was in better health, and shall soon grow fat. Here and in all the upland the climate is delicious; *balmy* is the word.

To Mrs. T.

Colombo, Ceylon, November 1, 1853.

Between Peradenia and Colombo we passed several of the great talipot palms in full flower, the first I had seen. This is the largest of the fan palms. It takes they say nearly a century to gather strength for flowering, then it throws up a huge flower stem, like a tree, from its summit, covered with myriads of white flowers, bears seed, and dies. Of the leaves they make tents, mats, hats, baskets, umbrellas, and many other things. The umbrella is very primitive, made by holding the thin part of the leaf, the broader part shading the wearer from the sun. When women are working in the paddy fields, stooping on all fours, twenty in a row, with these leaves tied on their backs and coming over their heads, they look like large beetles, and very grotesque. It seems to be always women who weed the rice fields. Before leaving the hills, we passed many noble specimens of *Cycas* (sago palm), which would make the heart of M. leap within him. Stems twenty to thirty feet high branching like candelabra, and each branch crowned with leaves. Four miles from Colombo we crossed a broad river by a bridge of boats, and soon afterwards the native town or pettah begins, and continues up to the gate of the fort. It is a long street of shops, and reminded me of the "lang toon o' Kirkaldy."

November 2nd. After breakfast I called on the Governor, who received me civilly, and I dine with him to-day, and to-morrow with the Chief Secretary. I afterwards took a carriage and

drove out to see the Bishop of Colombo, to whom I had a letter from Mr. Ward. He was very friendly, and asked me to join a dinner party in the evening, which I did, and found a company of seventeen, among whom was Sir Anthony Oliphant, Chief Justice, an old acquaintance of mine at the Cape. After dinner we had music, viz., anthems and hymns, the latter sung in chorus. The night being dark, the avenue from the gate to the house was lit up with cocoa-nuts fixed on sticks, filled with their own fat, and furnished with stout wicks. They made capital extempore flambeaux. The Bishop is a very agreeable man, but very unpopular with the greater part of the persons I have come across in the island: the fault they find with him is that he is too *high church*. I suppose he tries to act consistently, and they prefer a laxer rule than the church has ordained. I fancy many of the parishioners are dissenters, who *assent* to a very lax churchism, either for convenience or for fashion's sake, but who know not what spirit they are of. These cry "Puseyism! Puseyism!" at what is really only sober Church of England after all. He is building close by his house a very pretty little church as his cathedral. It would be a modest parish church in England, but here it shines forth as the only *stone* church in the island, all the others being lath and plaster. He told me it had all been built by native workmen, with the exception of the carpentry work inside, which is all being done by a handy soldier, whose heart is evidently in the work. The seats, desk, &c., are of satin-wood, very handsome and durable, and *cheap* here. They are very tastefully carved in ecclesiastical fashion, and when finished will be beautiful. A handsome stone font was sent from England, and bells and candlesticks are on their way. All will be in keeping. A native choir are in training, so anthems will not lack. I asked the bishop what the building had cost. He could not exactly say, but that it was paid for, from the commencement, every Saturday night, and he hoped it would continue to be so; it does not owe a penny. The work is solid stone and wood, and the building so planned that it can be enlarged to any required size without injuring its beauty. It is now finished, except to put in the windows, which are coming from England, and to pave the chancel with encaustic tiles. The whole is very creditable to the designer and workers. Attached to the cathedral church is a collegiate school under

the bishop's rule, for general education of Europeans and natives. There are eight boarders at present, about a hundred and fifty *out residents*, and twenty in the native orphan school. I hope this may prove a nucleus of a better condition of the church than at present exists in the island.

Before leaving Ceylon, Dr. Harvey spent a fortnight at a little inn at Belligam Bay, for the purpose of collecting algæ, where he was comfortably lodged, and found good accommodation for drying plants. Here he was joined by his friend Mr. Thwaites, who came principally to see and take leave of him. He writes: "Mr. Thwaites arrived yesterday. He will explore the neighbouring jungle while I work at the shores, and though we shall part and meet from day to day, I hope we shall be much together." It proved a time of good success. Writing to Mr. Ward, November 20th, he says:—

"I only commenced my algæ hunting ten days ago (the monsoon not permitting access to the shore till then), and the first day's work introduced a new *Claudea* and a *Vanvoorstia* (*nigra*), specimens of both which I enclose, that you may have a foretaste of the good things coming. I am sorry to say I must leave this charming spot in nine or ten days for Galle, to await the steamer which is to carry me on to Australia.

"Though my visit to Ceylon has not been so successful botanically as I had anticipated, I am very glad I came, as it has put me greatly *au fait* at the work before me, and enabled me to supply myself with sundry necessaries for collecting, which I had neglected to take; but chiefly, it has hardened me gradually to roughing it. You should see my forehead. Since I came to dear Belligam, it looks, from mosquito bites, like the frond of *Iridæa radula* in full fruit; but *Claudeas* and *Vanvoorstias* make up for many disagreeables."

In a letter of December, writing from Point de Galle, he says:—"Had I done as well in the first two months of my Ceylon trip as I have done here, I should leave with a very superior collection. I have gathered a hundred species of Algæ, and perhaps as many as 5000 specimens. Of a few I got mere scraps or a solitary specimen. Upon the whole I must not grumble. I was certainly much discouraged and depressed at Trincomalee, but my mind has become fortified against

minor troubles, vexations, and hindrances, all of which I expect to find plentifully in Australia. I am much more up to the labour of travelling, collecting, and roughing it, than when I left England, and better fitted to endure disappointment than I was three months ago."

The letter from which the above few sentences have been taken concludes with the following notice of the white ants:—"On wet evenings here the white ants are very troublesome. At this season, when the young brood leave the nest, they are winged, each with four large wings. In they come in troops, fly round and round, flap in your face, settle in your hair, on the dinner-table, anywhere, everywhere, and commence desperate efforts to get rid of their wings. They twitch them backwards and forwards till they fall off, and then the insect crawls away to commence its mischievous mining life. Quantities of wings are scattered over the tables and floor. Last night we had them; to-night there are none, or I should not be able to write this letter."

On the 12th of December, Dr. Harvey left Point de Galle in a steamer for Singapore, where, after a few hours' delay, passengers and luggage were shifted to another vessel about to start for King George's Sound, New South Wales. The passage through the Straits of Malacca, with the near view afforded of the Malayan shores, was not devoid of interest, though the features of tropical scenery had now in a great degree lost their charm of novelty. At Penang he and his fellow-passengers landed to visit a waterfall; and in this drive of four miles he found the same sort of country as in Ceylon—similar flat roads bordered by jungle, the same palms, and bananas, and wooded hills—very pretty, but tame to his eye, now accustomed to "this everlasting greenery." The culture here, however, of the nutmeg instead of the coffee-tree afforded some diversity, as well as the appearance of the rural population, who, being either Chinese or Malay, were very different, he writes, "in expression and costume from the long-haired Cingalese." He describes the nutmeg as a very pretty tree, with leaves in size and shape like those of the apple-tree, and always laden at the same time with both fruit and flowers; the latter, though different in structure, resembling in form those of the arbutus; the fruit like peaches, and very ornamental.

The letter proceeds :—" We sailed again in the afternoon, and for an hour or two passed close along the shore, land at each side, like lake and river scenery. Malacca looks very lovely at this distance, but I am not tempted to make its acquaintance more fully. This evening we passed through floating masses of green scum, which filled the sea so much that it looked when turned up by the paddles like so much green pea-soup—a perfect *sap-green.* I did not collect any, as my microscope was stowed away in the hold, and so I could have made no use of the green matter; a poor excuse, for it ought to have been at hand. It was probably a minute *Oscillatoria,* or perhaps only the spores of some green seaweed. Whatever it may have been, it was immensely abundant—enough so to entitle the place to be called the *Green Sea.*"

CHAPTER XIII.

AUSTRALIA.

With the exception of touching at Batavia, Dr. Harvey's further voyage afforded little variety. On the 6th of January, 1854, Cape Entrecasteaux came in sight, and he landed next day at Albany, on Princess Royal Harbour, King George's Sound.

To begin with the first impressions of what he calls this topsy-turvy country; after having had an exploring walk in the neighbourhood of Albany, he writes: "The vegetation here has quite the appearance of that at the Cape; the same small shrubs and dry-looking trees of *Proteaceæ*, though they are both generically and specifically different. *Banksias, Dryandras, Hakeas, Franklandia*, etc., are common. About the town some Cape shrubs and geraniums are completely naturalized. At present the prevailing hues of the flowers are white and yellow. I am told that a month ago, blue, red, and purple were the most common, and that the whole of the country was one mass of bloom. The oddest things are the rush-trees, like mops with thick black handles, ten to twenty feet high. Imagine these strange objects scattered over the country, sometimes very thickly. The trunks are always black, from the fires which are constantly lighted by the aborigines, and which sweep over the country for miles. The boggy spots have in abundance the curious pitcher-plant (*Cephalotus*), with a cluster of beautiful cup-shaped leaves, each with its lid, at the crown of the root; no stem, but a slender stalk bearing a few small flowers at the top. It is only known at this spot, and is 'one of the lions.' It was shown to me before I was an hour on shore."

January 10th. There are many natives to be seen here, who live in the bush about the town in such "cobby-houses" as we used to build when we were children. Here six or eight will sit

huddled up round a fire in the middle of the hut, or lie rolled up into balls on the ground. They will not willingly come under roofs, and have a holy horror of soap and water. Their favourite cosmetic is a red ochrey earth, with which, when mixed with grease, they smear their heads and faces. They are diminishing here as elsewhere, and seem to die the faster, the more care that is taken of them, and the more it is attempted to civilize them. Several persons have brought in boys to train in their houses, when they readily acquire our language and adopt our habits; but when they come to fourteen or sixteen years, they mostly die. Some who survive will go back to bush life again, the charms of red ochre and grease being superior to cleanliness. Archdeacon Wollaston had reared a boy from childhood who was an intelligent and useful servant, had adopted all our manners, attended church and family prayers regularly, and could answer any question usually put to Sunday-school children. When he was about sixteen, Mr. Wollaston was moving from Bunbury, where he lived, to this place, two hundred miles distant. The boy came with him half way, then said he would go no farther, but must go back to his old father, who was a wild bushman; and so he threw away his clothes, and went off to take to blanket, paint, and grease again. Yet he had lived with Europeans for many years, and, to all appearance, had been a good Christian.

January 12th. My collecting has not been at all prosperous. Dredging is uncertain, by reason of wind and storm. I have been out only one day, and then had poor success. A few mornings ago I was on the rocks gathering *chitons*, when a native woman came up, saw what I was doing, pointed to some other rocks, and said, "Plenty that kind *there:* shall I bring?" "Yes." "You pay me?" "Yes." "What I bring in?" "In white water." "You give me bottle?" "No; you get bottle yourself." "I bring in pannikin?" "Very well." So in half an hour she came back with her apron half full of the shells, and was thankful for sixpence.

Dr. Harvey found a kind and very efficient friend in Archdeacon Wollaston, with whom and his family he spent many cheerful evenings. He says of the occupation of his time, "The days pass over very regularly. I rise at five, and 'change

papers' on the previous day's plants, breakfast before eight, then walk for two or three hours on the beach or rocks, collecting; then home, laying down Algæ till dinner, about five p.m.; then, perhaps, a short walk; tea at my lodgings or at the Wollastons', and to bed at ten."

The prospect of a harvest of Algæ at King George's Sound continuing but small, Dr. Harvey resolved to try his fortune at Cape Riche, having received a friendly invitation from Mr. Cheyne, a gentleman who had a farm on that shore, to make his house his home for some weeks. Thither, towards the end of February, he accordingly went; but before setting out on this journey of eighty miles, he was somewhat cheered by a storm in the bay which threw up a quantity of seaweeds. "In one day," he says, "I collected and preserved 700 specimens, some being new kinds." In sending seeds of land plants, the *Boronia megastigma*, and others, he writes, "One rarely can get ripe seed here. Some plants seem seldom to ripen any seeds, and others are attacked by troops of maggots, which are deposited in the young pod, and eat the seed as it matures. This is especially the case with leguminous plants. The cabbage-tree (*Nuytsia floribunda*), one of the commonest and most showy of the flowering trees, and which produces annually sheets of golden orange flowers, thicker than the leaves, so that the bush looks a blaze of gold, has never been known to produce a single seed from all this display. How many centuries since the present stock were sown we cannot tell, but the only increase is by underground suckers from the roots of the old trees. These spread to a great distance, and then form a new stock for themselves. Probably this tree has some *underground* parasitic attachment, as it belongs to the same natural order as the mistletoe."

The journey to Cape Riche, being Dr. Harvey's first experience of bush-travelling, claims some notice. He left Albany in company with two of Mr. Cheyne's carts, their drivers, the sister of one of them, and a convict servant. As the rate of travel was three miles an hour, he preferred walking to a seat in the cart; so, with the convict as his companion, he amused himself with picking the numerous flowers by the way. They saw one of the carts "suddenly upset, completely bottom-upwards, and the shaft-horse on his back, kicking, while the tandem pulled restively." Matters being got to rights, and some fowls caught

which in the overset had made their escape into the bush, they proceeded on their way; and after twenty-four miles of travel, during which he rode but half an hour, they pitched their tent for the night, and spread their blankets over a bed of gum-tree twigs. Then came the tea-making. "A fire," he writes, "was soon blazing in front of the open end of the tent, and a kettle boiling thereon, into which, when boiled, a handful of bohea was thrown, and presently it became tea. The head waggoner proposed to put sugar in also; but I begged first to have my pannikin filled—and had it accordingly. Our meal consisted of bread, cold pork, and mutton, the usual bush fare. After supper we all lay down; the two waggoners and myself side by side; the lady slept in one cart, and the convict under the other, making himself as cosy as circumstances allowed of, but decidedly in the worst place."

Disappointment awaited him at Cape Riche also. "The shore here," he writes, "bad for Algæ; very little to be collected at low water, and I am therefore dependent on storms for throwing up weeds. I take daily walks to the beach and over the hills, but the land botany is very much over at this season; the plants out of flower, and the annuals vanished. Some of the larger shrubs are, however, in perfection. In one of my rambles, when returning to Mr. Cheyne's, I was interrupted by an extensive bush fire. I could not *flank* it, so had to *face* it, and soon selected a spot where the smoke was less dense and the flames less noisy, and found no difficulty in crossing the line, though blazing. Once over, I was merely walking on burnt ground, every now and then either passing a "black boy" (*grass* tree) or an ant-hill still on fire. Both these burn long after the smaller matters are consumed. Along the margin of the line of flames, a number of crows were hopping, picking up the crickets and other insects as they fled from the fire; and troops of black cockatoos come to the burnt ground to pick up the seeds which are plentifully scattered by the heat. Most of the seeds here are contained in very strong, thick, woody seed-vessels, which only split open after long basking in the hot sun, or after bush fires. Such are many of the *Proteaceæ* (*Banksia, Hakea,* &c.). The bush had been purposely set on fire by Mr. C.'s men, for the double purpose of destroying the *poison-bushes,* and to make the grass grow better, which

it is expected to do after the rains. One sort of the poison-bush affects the cows with blindness, another brings on rapid inflammation. On the road we started several kangaroos, often quite close. They stopped to look at us, and then hopped away, leaping over the bushes in double-quick time. There are very melancholy-voiced frogs here, regular *howlers*, and others that make a noise like *groaning*, or as if inclined to be sick in the stomach. The cockatoos are awful screamers, and the crows drawl out a long plaintive whine, between the wail of a child in distress, the bleating of a sheep, and the bray of an ass; a compound discord of these three. The strange palm-like rush-trees (*Kingia*) are very fine about here, and particularly remarkable for the large mass of decayed leaves which cloak the upper half of the trunk. Usually these are burnt off, the fire rarely injuring the life of the trunk, but only blackening it and destroying its leaves. New leaves, and generally flowers, quickly spring out, but the cloak, which is the result of several seasons, is never seen where fires are frequent. Some few small birds chirp, especially after sunrise, but on the whole the woods are very quiet, none of the shrill insect noises which fill the American forests. Pigeons, and red and blue parrots, start from the thick bushes with very noisy wings. I have seen a bird soaring and fluttering like our skylark, but he was a dummy. To say that the flowers have not any smell is not true; some have a very bad smell indeed. I have no time to add more. The above was written last night, when I had to stop, as sleep overpowered me at half-past ten. It left me this morning at half-past two, so I got up at three, mended my glove till four, wondering all the time how the original seamstress could afford so many stitches, and sell the finished article for a shilling—hard earning!"

Leaving Albany on the 2nd of April, after a journey of eleven days, Dr. Harvey arrived at Perth, Swan River, where he met with a kind reception from Mr. S., the colonial secretary.

Passing over his bush journey, and the botanising it afforded, we find our traveller "housed" in a tolerably comfortable inn at Freemantle, the port of Perth. His first walks in this neighbourhood presented to his notice many things too curious and interesting to be omitted. In a ramble over the hills,

coming to a sandy pathway, "I was struck," he says, "by seeing a number of little funnel-shaped holes, like those made by the ant-lion for catching his prey; but these are the traps of an underground toad, who sits at the bottom of the hole, about two feet below the surface, doubtless ready to gobble up any insect that falls in. On the blown sands were also abundantly seen sinuous ridges, precisely resembling those so common on the flags in the streets of Limerick, and which in a certain publication called 'The Seaside Book' are referred to the trails of the marine mollusca. Now the present tracks mark the underground roads of the mole cricket of this place; and if they were consolidated into stone, might puzzle future geologists who were only up to the marine cause, as the little ridges left by the wind resemble those left by water ripple. Going further, I noticed a Banksia tree with some huge *woolly nests* of inextricable leafless branchlets. They were not unlike Hottentot's heads, and are formed when a certain little fly fixes on a young flower-bud as a nest for its eggs. It pierces the young bud, and deposits its eggs, and this strange branching excrescence immediately commences, the plant constantly trying to form its flowers, while the poison of the insect puncture as constantly produces monstrous branches. Sap continues to flow to the irritated spot, and so the growth there is most vigorous, keeping up an abundance of juicy nourishing food for the young maggot. Such is the history of all the galls, &c., found on trees; they abound in this country, but none are so monstrously developed as those of the Banksia cones."

April 18th. I walked to Mongais Lake, a sheet of fresh water about three miles from Perth, to look for freshwater shells; but I only found a *Physa*, very abundant, and very variable in form, unless I confound several species together. Among the trees which wooded the lake was *Banksia prionotes*, a handsome species, with rich orange heads of flowers as large as ostrich eggs, and very showy. On the 19th Mr. Drummond, the botanical explorer of this colony, arrived, having come upwards of forty miles to have a chat with me, and to ask me to visit him in the country. He had formerly been in charge of the Botanical Gardens in Cork, and emigrated to this country twenty-five years ago, since which time he has travelled over most parts of it, and to him we owe our knowledge of at least

three fourths of its vegetation. He is a venerable looking man, with snow-white hair and long beard, square-built frame and ruddy features, and an intelligent eye, that lights up with enthusiasm when on his favourite subject. His habit for years has been to traverse the country in the collecting season with his three ponies and one or two natives, and to live for months together in the bush, shifting his quarters as he exhausts each neighbourhood. He had many things to tell me about the local vegetation, and particularly of several new and curious genera which he had recently discovered in a newly-opened country three hundred miles to the northward. He gives a most glowing account of its vegetable riches, reports two new genera of *Proteaceæ*, besides innumerable beautiful species of the same order, and a superb *Verticordia*, with brilliant crimson flowers as large as half-a-crown (the usual size of the flowers of the old species being a threepenny piece), and the shrubs perfect sheets of bloom, so beautiful that the waggoner who drove him used to stop and turn his bullocks out of the road, to avoid trampling down this plant. Mr. D. gathered so much of it the first day he saw it, that after putting into papers as many specimens as he required, he fairly made his bed of the remainder. Unconsciously he had plucked such a quantity and stuffed his bags with it. One of the *Rue* family is a very curious and beautiful plant, and quite a new *type* in that order. He told me also that he has noticed a curious irritable movement in the hairs of several of the composite plants here, particularly in those of the everlastings; one hair bending towards another, and then the two half revolving backwards and forwards. Next day we had a walk together by the river-side and over the hills, when I gathered a number of a species of snail (rare things here), and Mr. D. got specimens of a little shrub (*Cryptandra tridentata*), which he had repeatedly sought for before and never happened to spy, so we both returned pleased.

April 21*st*. I bought a supply of buckets, bowls, and plates, for Algæ work, and had a walk with the controller-general of convicts, Captain H., who is an amateur naturalist. We picked up many small matters on the beach, but few seaweeds, which I am told to expect after a gale. Alas, the weather is *cruelly* fine! However, I found several pretty good specimens of *Crassatella kingicola*, a bivalve shell, interesting as one of the

only living members of an extensive fossil genus (characteristic of the London clay formation) which abounded in the seas of the primæval world, and is *only* found in Australia, which country (as you perhaps know) has animals and plants more closely allied in general to those of the fossil world than to those of any modern country. Perhaps, when the centre of the continent shall be discovered, we may find the actual living things of the oolite times, or at least the first remove from them.

Some of the lizards are very grotesque. One called the *York Devil* is particularly so. It is about the size of a chameleon, and as slow in its movements, and covered all over with large spiny tubercles, with a pair of *diabolical* horns and claw-like fingers; when you hold him up with hands outspread, he looks very like the popular notion of a devil. Some other kinds are of large size, almost like crocodiles. Mr. S. has a pet boa, which he sometimes brings into the parlour to amuse company; it is rather vicious, and once bit him in the face.

This place is an excellent locality for Algæ. I am daily finding fresh ones, and have the prospect of a good harvest of novelty and interest. The season is daily improving, and I must not hurry from these shores. The days are too short for my work. My best collections are made at Garden Island, nine miles distant. I have been twice landed for a two hours' walk, and on both occasions collected so much that it took three days to lay them on paper. I have had several days' dredging, and found a new species of *Dasya*, which I shall call *Cliftoni*, after my kind friend, Mr. Clifton, superintendent of water police, whose boat I use, and who takes much interest in my work.

Last evening, walking on the strand, a gentleman riding past touched his hat, and on my returning the civility, asked if I were not the gentleman he had heard so much about, who was come to collect seaweeds. I confessed to being that unfortunate wight. Whereupon he hoped I might not leave the place without pointing out some that would be "*good to eat*;" "good for something," in fact. "He knew there was an *edible* one, much better than Carrigeen!"

The weather, since my arrival, has been the most perfectly enjoyable possible. We have had nothing like a gale since the middle of April. I hope June will bluster a little, as I want to see a good *upheaval* from the bottom. I cannot find time here

for land plants without neglecting my more legitimate work. Picture me as I daily walk the streets of Freemantle, beard grown and hair streaming down behind, for I am forced to brush it straight backwards to keep it out of my eyes; my wide-awake, and a blue-striped jacket, such as butchers' boys do wear! Sometimes I have a stable bucket in each hand.

Rottenest Island, off Freemantle. Swan River,
June 27, 1854.

It seems as if every new place in Australia (so far) was pleasanter than the last, and if it goes on at this rate, I can't say when I may think of turning homeward.

I sometimes, when very frisky, hum to myself new words to one of Mrs. Hemans's ditties, viz.: "When shall I think of you, kind friends? When shall I think of you? When I've nothing better to do, kind friends, Then I'll think of you!" I am so fully employed, that I have no leisure for home-sickness. I must try to give you some idea of this fair island with so foul a name, which is Dutch, and means "*Rat's nest,*" the Wallaby or kangaroo-rat being plentiful here.

The reefs, like those at Freemantle, are limestone, and resemble filigree-work, putting on the most diverse forms, often reminding me of miniature hills and valleys; in some places extremely difficult to walk on, from the sharp points that stick out everywhere. Many parts are all honeycombed. Those under water, accessible at spring-tides, are still more extraordinary. Some of these extend in horizontal shelves, merely fixed in the centre like mushrooms on their stalks. The rock pools are of magnificent dimensions, and ten or twelve feet deep; the water clear as crystal—I had almost said as air; and when the surface is calm, the view therein is extremely beautiful. The sea anemones do not equal those at Miltown, nor are there richly-studded urchin-pools, but this is compensated for, in the richness and luxuriance of the Algæ which fringe their steep sides. One genus, *Caulerpa*, is very ornamental, of which I have collected ten species, all of a rich green, and much diversified in form. Some are like ostrich feathers, and equally large and soft, others like the tails of squirrels or Persian cats. Others, again, like strings of beads. Mixed with the red Algæ and Corallines they have a beautiful effect.

Rottenest has one fault at this season. There is but one tide in the twenty-four hours, and it so happens that at spring tides (which are the only times the reefs are bare) low water occurs late in the evening, and now, in mid winter, *after dark;* so that I lose the best time for exploring the reefs, and am precluded from visiting the more distant ones. The island is well wooded. The most common tree is a cypress (*Callitris Preissii*), with leaves of a bright cheerful green, a very unusual tint among the sombre-leaved trees of Australia. Two kinds of Acacia form dense shrubberies difficult to walk through. A leguminous shrub called *Templetonia* is also very abundant, and just now the gayest plant here, being covered with its large crimson flowers. A hoary shrub called *Stenochilus*, with flowers not unlike a *Salvia*, varying from yellow to orange or blood red, is common, and a narrow-leaved *Clematis* ties the shrubs together in a way rather aggravating to a "*traveller*," whose "*joy*" it is not. Of small plants few are yet in blossom, but the ground is thickly covered with young seedling annuals, which in a few months' time must make a gay show, but I shall not see them in their glory.

I must not forget to mention the persevering *spiders* which weave their nets from tree to tree, and bush to bush, across every pathway in the island; rendering it necessary to keep a stick in constant motion, in order to clear the way before you, unless you would have your face covered, every few minutes, with very stout cobwebs Sometimes I have thought it a pity to destroy such an elaborate net, but you cannot otherwise "get along."

I am living at the governor's house, part of the old convict establishment now given up. The governor very seldom comes here. My housekeeper is an old woman of respectable class, who is now in her ninety-third year, yet hale and hearty, and who keeps the whole house in the most exquisitely clean state, without any help. You see her on her knees scrubbing the floors, which to my eyes appear so clean you might roll out pastry on them; then dusting the walls and wiping the doors and windows is an endless job. She makes my bed and lights my fire, bringing in the firewood herself. Her chief trouble is that the people who farm the island steal her eggs and chickens. She is mother to the pilot's wife, Mrs. Back, at whose house, about a hundred yards

distant, I take my meals, and who is an excellent cook, feeding me with dainties every day. Her husband is a baker by trade, so we have good bread, and her daughter makes nice sponge-cakes for my tea. There is no milk, however, as cows will not live on the island, the land being poisoned; neither will goats thrive.

July 17th. At Freemantle.

We crossed from Rottenest safely on the 2nd, since which time I have found considerable novelties. My list of species is now 290, and I have dried nearly 10,000 specimens, not bad work. I return to Albany towards the end of this month, and intend to sail from thence for Melbourne.

Dr. Harvey had now nearly completed the first year of his projected travels, and with the exception of being somewhat discouraged and out of spirits at Trincomalee, the course of events had flowed smoothly, and he had met with little to interrupt his enjoyment. But a sharp sorrow awaited him at Melbourne, which for a time occupied the place of every other thought. One of his cousins, a young man of promise, who had left home for the colony a few months preceding his own setting out, died suddenly just before his arrival. He had anticipated with pleasure finding him at Melbourne, and the news of one away, like himself, from home and kindred, being thus suddenly cut off, could not fail to affect him very sensibly. His heart was filled with the deepest sympathy for those on whom the stroke had most heavily fallen, and one or two of his letters written in reference to the sad event, exhibit so truly his genuine tenderness and depth of feeling, that it would seem hardly doing justice to his memory were the editor to withhold them.

To Mrs. F——.

Melbourne, September 1, 1854.

Nothing can break the news to you, or lessen the intensity of your grief; but the one Friend to whom "all hearts be open" will not leave you comfortless in this great trial. He will not break the bruised reed utterly, and surely He never afflicts but with merciful purpose.

I hope to see Mr. Le M—— soon, as I am going to Port

Fairy next week, and all the news I can pick up of your darling I hope to write you from beside his grave. *We* (you and I) were bound together already by many and bitter sorrows, and I did not think it could be closer, but this new affliction makes me feel still more with you and for you, the poor afflicted one. What troubles for four-and-twenty years, and now this dreadful blow. But thank God you are more able to bear it now than you once were, and may yet realize the last line of G. G.'s poem on R——d:

"'Twas well that our dwelling looked sadly and lone."

Who can tell *what* really is "well" but the One who knows the *end* from the *beginning*, and who also hath taught us, by His holy apostle St. Paul, not to be sorry as men without hope, for them that sleep in Him? That last beautiful collect of the "burial service" may I trust be put up beside his grave.

I found two or three parcels of letters and newspapers addressed to H—— at Mr. R.'s office. The *letters* I shall send home. Among the papers I opened was the Christmas number of the "Illustrated News," with its "Merry Christmas and Happy New Year wish," all the parts sewed together, and I fancied I could see you making it up of an evening at B., and folding it with all its fond wishes, and it never reached him. It is only occasionally and rarely that opportunities are found for distant places.

To Miss F——l.

Melbourne, September 6, 1854.

May we all be granted "to stand in our lot at the end of the days," and to look back at these trials and sore troubles as one does on the incongruities of a sea voyage. After all, time is so short a part of the life of an immortal soul, that in looking backward (if we shall be able to do so) from "the rest that *remains*," all our present frettings and troubles must then seem utterly insignificant. Every day my thoughts grow more and more thus, and yet you will say my conduct is opposed to such thoughts; for here I am, travelling far for the sake of amassing objects which I must leave for others, laying up treasures for the moth and the rust. True; yet they occupy a very small portion of my thoughts, and I can truly say that I could leave them all at any moment without care, were I only meet for an entrance

into the *rest* where there is no further novelty to occupy the mind, but where knowledge is full and clear. Still, while I am here, it is my pleasure to pursue the line of study for which I seem to be best fitted, with as much ardour as if I were adding to my own wealth; and I do so with the greater zest and zeal, because I feel I am *not* adding to my *own* wealth, but amassing for a permanent undying institution like Trinity College, Dublin. I should not have a tithe of the pleasure I now have in my pursuit, if I thought that all my collections would be dispersed at my death; and I could go on as zealously working for the mere advancement of knowledge were I in the last stage of consumption, and felt that what I was working at could never be of use to myself further than as a present occupation and amusement. I am grateful for that amusement and occupation while it lasts. It serves my purpose for the moment, and leaves no deeper impression. As for posthumous scientific fame, I have long ceased to care much about it, more than that I should like to leave nothing behind me of which my friends need feel ashamed. If there be any posthumous fame that I wish for, it is that of my great-great-great-grandfather, old Henry Harvey of Ballyhacket. "He was an innocent, honest man, who loved his friends and the truth he made profession of." But I feel I have a long long pull to make before I can come up to this mark.

To Mrs. F——.

Belfast, Port Fairy, New South Wales.

I wrote to you from Melbourne early in last month, and arrived here (after many detentions) on the first instant. I have not learned much more to tell you of your poor boy. I copy for you a few lines written in pencil in his memorandum book, probably not more than a few weeks before his sudden summons. He had evidently intended putting on paper some account of his life, but seems to have been interrupted and never to have resumed the matter. No doubt, however, in thought he had reviewed the whole. I trust, therefore, that we may take these few lines so traced, as evidence of a much fuller opening of the mind to Him that seeth in secret, and that in his solitary tent at midnight in the wilderness, he found that communion which he had failed to discover under more favour-

able circumstances. We know not what we ought to pray for or to wish for in this world, and must trust our all, as of ourselves individually, so also of those we love, in His hands "who wills not that any should perish," and whose Spirit was with poor H. in that review he was taking of his past shortcomings. More we cannot venture to do, and less we are commanded not to do. God comfort you, and lift up the light of His countenance upon you, and give you peace, now and for evermore. The plot of ground in which he lies is a short distance from this town, and there are already many graves in it. A few of his friends here have subscribed to put a railing round the mound, and a tablet with his name, to remain temporarily till the tombstone which I have written for shall arrive. There are no gravestones to be had here. All the tablets but one in the graveyard are of wood. I have written to H. H. T., to have the stone cut according to your wish, and at my expense, as I wish to make this little offering.

October 22*nd*. Sunday night. We walked out again this evening to the cemetery. From a neighbouring grave I gathered some slips of wallflower, and have planted several within the rails, some of which I hope may grow. After I had done so I turned to see from whose grave I had taken them, and found it was that of a child one year and eleven months old, died 1852. On the head-board was written—

"He's on his Saviour's bosom,
And feels no sorrow there,
He's by a Heavenly Father fed,
And needs no more our care."

The poor mother had planted tansy, southern-wood, periwinkle, and wallflowers—*bitter herbs* and *sweet flowers*—over her dead, and had evidently lately visited it, as the wallflowers had just been pruned where they were hiding the headboard.

The railing is very strong and good, and in this climate will last our time at least. I am much better satisfied since the place has been enclosed. I have put to dry, two flowers of the wallflower for P. and N., taken off the slip which I put at his feet.

Yours affectionately,
W. H. H.

CHAPTER XIV.

AUSTRALIA.

Taking up again Dr. Harvey's journal-letters from Melbourne, the first record to be noticed is a ride of seven miles to Mr. A.'s diggings. On his way he observed the St. Mary's thistle, "abundantly diffused and of gigantic size." The botanising ground near Melbourne, he writes, "proved but scanty, the fields being too well covered with grass to allow of many plants save buttercups and daisy-like *Compositæ*. When carefully looked for, a few minute plants may be found, among which is a little *Veronica*, scarcely two inches high, but with large blue flowers. About three miles from town, where the road struck into a gum-tree forest, the grass was gay with a little starry flower (*Hypoxis vaginata*), and a blue squill-like plant (*Cæsia umbellata*). A few *Orchideæ* and a little *Drosera* were also picked up. On a sandy heath *Epacris impressa*, to be seen at the College or Glasnevin gardens, was extremely abundant, and very beautiful. I had not met with it before.

"The country around Geelong is like the curragh of Kildare, a resemblance which struck me at once, and I suppose has struck others also, for one of the neighbouring villages is called Kildare."

October 15th. I have had two weeks' experience of Port Fairy, and have made a considerable collection of algæ, but not so many new species among them as I had anticipated. Perhaps the most interesting one to botanists will be a new and perfectly distinct *Ballia*, which I purpose calling *B. Robertiana*, a name which will include in sound, though not in sense, both Robert and Miss Ball. It is quite as beautiful under the microscope

as the old one, but being of a brownish-red colour, it is not so pleasing to the eye.

Strolling on the beach of Port Fairy, I beheld for the first time the famous giant oarweed, *Sarcophycus potatorum*, with a stem as long and as thick as a man's leg, and leaves like cow-hides stretched out, but measuring from twelve to twenty feet long. I shall be puzzled to find specimens small enough to preserve, but must at least bring scraps.

One day Mr. H. and I rode from Melbourne to Tower Hill lake, about nine miles from town. On reaching the steep bank of the lake we looked down 200 feet into what must have been an extensive crater in old times, but is now partly a lake and partly a marsh. In the midst is a wooded island, rising like a cone 300 feet above the lake. There are two or three summits, in which there are said to be small craters. The borders all round the lake have similar marks of volcanic origin, and all are beautifully wooded. We had only time for a hurried scramble down the steep sides of the lake; and the ground being covered with rich grass, I got but few flowers, but among them was the little Australian forget-me-not, with white flowers, the beautiful *Ajuga Australis*, a fairy violet, a nettle, and an indigo. On the waters of the lake myriads of a little *floating fern*, looking like duckweed, were swimming. Its name is *Azolla*. For its size, which is only an inch across, it is extremely pretty.

In a walk to Toorak, where the Governor lives, a very pretty place, I picked *Brunonia Australis* for the first time. To the eye it is like *Jasione montana*, but with taller and naked stalks, and deeper blue flowers.

Brighton Hotel, Port Phillip, November 5.

I came here yesterday, and am settled at a pretty fair hotel close to the beach, where I am lodged in a garret room up in the roof, lighted by a skylight of one pane of glass about twice the size of an ordinary "porthole." I can stand upright in nearly half of the room, and sit comfortably in most of the rest. I do all my algæ work at a little table, hiding the papers and parcels under the bed. Though only at the opposite side of Port Phillip, some of the commonest of the Geelong weeds are not to be seen here, and vice versâ. One fine *Polysiphonia*, two or three feet long, which I gathered here; was new to me, and

I propose to call it *P. Victoriana*, either after the Colony or the Queen. When fresh it is like luxuriant tresses of pale auburn hair, but almost immediately, if left in the air, turns to rose-coloured slime or jelly. I have managed, however, to preserve it pretty well.

On the return of the Wyvern, government tender, now out on duty, the governor will send her especially with me to Phillip Island, Western Port, where I am going to land with my hat in my hand, and to say, "Dear Mr. Mac H., here I am landed, but in want of bed and board. There are none, you know, to be had on your island for money, so pray give them to me for love. All I want is a comfortable room, as many tubs of fresh water as possible, and plenty to eat and drink," &c., &c. I have a letter of introduction to this gentleman, and on the strength of it am going, if I can, to quarter myself on him.

Queen's Cliff, Port Phillip Head,
November 30th.

I took three places on the post car from Geelong to this place, two of them being charged for my luggage. The other passengers were very good-natured, and submitted to be hampered by my ungainly bundles of paper, iron frames, buckets, bowls, dishes, and baskets. "I like to be accommodated myself," was the polite reply of one of the passengers to whom I apologised for my buckets pressing against his legs in the well of the car. We had a pleasant drive of twenty-one miles, which we accomplished in three hours, arriving in time for the Hotel dinner.

I take my meals with the Hotel people, and sleep in a sort of barrack-room, with four beds and a narrow passage between each. One of my fellow-occupants is the driver of the omnibus, but the other two beds are dependent on chance. One night of the seven I have been here I had the room to myself, but on all the others two or more beds were filled. Some are a little noisy going to bed, but soon settle down, and on the whole the disagreeability is not excessive, as they let me alone, and I go to bed generally first and rise first. The most disagreeable thing is, that the sheets seem to be changed only at stated intervals, no objection being made by the chance visitors to sleep in those of the former occupant. As I arrived in the

middle of the week I found such as I did not choose to lie in, and so, not to give offence, I slipped between the blankets; and this I practised till I observed that a change of linen had supervened. So much for personal accommodation. I am much better off touching my collections, as the landlord (a Limerick man) gives me the use of a sitting-room, in which I can make a mess to my heart's content. Hitherto I have had it undisturbed, but to-day a boat from Geelong, with a picnic party of excursionists, has filled the house with drinkers and revellers, who of course have preference over a water-drinking algologist; so I had to put away my affairs and turn out at a moment's notice. I am therefore writing in my quarter-bedroom (or more literally my quarters).

I have of course been much occupied with Algæ, and have a fair collection, though mostly of known species. I got one rather interesting novelty, a new species of *Sarcomenia*, almost completely uniting that genus with *Dasya*, and yet "with a difference." This is the second species I have added to this genus, which is closely analogous to *Desmarestia* in habit and in its peculiarity of rapidly changing colour in the air. All the species when growing are a pale fawn grey with iridescent tints, but a few minutes after they are brought into the air they become a beautifully clear rose red, and they preserve this colour in drying.

The trees in this neighbourhood are principally she-oaks (*Casuarinæ*), which have rather a sombre look, being more like arborescent horsetails than anything else. (Specimens may be seen at Glasnevin.) All the twigs are jointed, and have little teeth at the joints, where they easily separate. I have found but few additional land plants here. The only fern is the common brake (*Pteris aquilina*), exactly similar to ours at home.

Melbourne, December 29th.

I sailed in the Wyvern on the 8th, for Phillip Island, and we entered the harbour at eleven o'clock next day. I found Mrs. Mac H. at home, who assured me her husband would take me in, and that I could have every facility for my plants, &c., so I returned to the vessel and landed after dinner, with bag and baggage, weighing nearly five cwt., which the sailors had to carry on their backs over the sandhills for a quarter

of a mile to the house, poor things! I have called Mr. Mac H.'s dwelling a house, but in colonial phrase it is only a "hut," being a three-roomed "wattle and dab" erection, like a small cottage. Nothing could exceed Mr. and Mrs. Mac H.'s kindness to me the whole fortnight I was with them. I have made a very good collection of Algæ at the island, and have discovered one very curious new species, resembling in form the many-headed cotton-grass of the Irish bogs. "Colloquially" I call it "bob-tails," but botanically I am going to name it *Bellotia*, in memory of Lieutenant Bellot, the young French volunteer who was lost in the search for Franklin, and I mean to send it to a friend in Paris, to be noticed by the French Institute and published first in that city.

The shores are thickly strewn with sponges of all shapes and textures. I have collected a barrel full, which I hope to send home. There is also an immense quantity of a sea-squirt or *Ascidion*, which looks like a dried Normandy pippin or a wizened potato! On the end of one of the reefs a much larger species of a similar animal is abundant. It is funnel-shaped, one or two feet high, excessively tough, stiff, and shaggy, and adheres most firmly to the rocks, standing high and dry at low tides. A species of burrowing *Echinus*, or urchin, something like those at Miltown, is found in the rock pools. I have preserved a pair for R. Ball. Thus my time passed rapidly away, fully occupied with my collections, and at the end of the fortnight, to my no small regret, the Wyvern came to take me back, and I left the island not half explored.

I have called a very beautiful plant *Apjohnia*, partly after Dr. A., and partly after his wife. I am, thank goodness, in health and spirits, not homesick or tired. I rise at five or six, and go to bed before eleven.

Dr. Harvey left Melbourne on the 13th January, 1855, for Georgetown, Van Diemen's Land. Here he introduced himself to the Episcopalian clergyman, the Rev. Mr. Feraday, and was fortunate in finding in him an enthusiastic lover of natural history, and especially of Algæ. He had a boat and dredge, and at once volunteered himself a firm ally and assistant. During the month of his stay they had many excursions together, and to Mr. Feraday's kindness and thorough know-

ledge of the best localities he attributed much of his success in this estuary. He added to his specimens many beautiful novelties, including "*Claudea*" ("the Queen of all Algæ"). A visit to Mr. Archer at his country seat, forty miles distant from Launceston, and travelling from thence by stage-coach to Hobart-town, enabled him to become acquainted with the interior of the country.

Before leaving Georgetown the sad news of several deaths among his botanical friends reached him, none of which, he writes, "affected me so much as that of poor Edward Forbes, which I first saw in one of the Launceston papers, but have since heard of from Sir William Hooker. I had a warm affection for him, as well as admiration of his talents and acquirements. He will be a very great loss to British natural history—a loss not likely to be filled up in our time, and which has occurred just when his sphere of usefulness appeared to have been greatly enlarged. If men only worked for fame he has done enough for that, though so young. I remember him as almost a boy.

On the afternoon of February 25th I left Launceston by the mail-coach for Hobart-town, a journey of ten hours, but which, owing to the time lost on the way, took fully fifteen, as we regularly pulled up at every public-house, whether the horses were to be changed or not, and had a stop of about twenty minutes at each. The only cessation to this drinking was in the middle of the night, when the houses were shut up.

We had a stoppage for supper at two A.M., and for coffee at daylight, when I mounted the top of the coach to see the country, which is well cultivated, and we rattled along a macadamized road at a spanking rate.

On arrival at Hobart-town, having breakfasted, I visited G. W. W., J. Backhouse's travelling companion, and then called on the assistant-controller of convicts, for permission to visit Port Arthur. Roaming along the wharves I came to the Custom House, where I stepped in to present a letter of introduction to a Mr. W. He took it cautiously, looked at it and me, and kept me standing till he had spelled out a good deal of it, when he begged me to be seated and began to thaw. I thought of Wilkie's picture of the "Letter of Introduction." However, having read the letter, Mr. W. became very civil, and our interview ended in his pressing me to dine with him next day.

February 27th. Rose early, and at eight o'clock, hearing church-bells ringing, I stepped in, partly to see what daily service in Hobart-town was like. It was the "cathedral" church, and there were present four ladies and one man, besides myself and the pew-opener—as large a congregation as would probably be found in St. Paul's, London, at the same hour. I thought it a day of very small things. After breakfast Mr. N. took me to the public library, and made me free of it. Its chief nucleus seems to be the library of Mr. Bicheno, who was Colonel Page's companion when he visited us at Miltown, and who afterwards was Colonial Secretary here.

February 28th. Met a phrenological party at G. W. W.'s house,—paid ten shillings for having my head felt, and got a sheet of *gammon and spinach* in lieu thereof.

March 1st. Sailed for Port Arthur. There was a large party of chained convicts on board, guarded by soldiers. I lay below on a sofa with a book, and fell asleep, but fortunately awoke just as we approached Cape Raoul, the first remarkable point, and a splendid object from any and every side, being a narrow jutting headland of basaltic columns nearly 300 feet high at the highest point, and from fifty to eighty at the lowest, standing together like the pipes of an organ, the top in many parts broken, so that single pillars stand out like pinnacles. Parts are like Gothic architecture, and as we passed close beneath, the disposition of the rocks varied from moment to moment, every few minutes presenting a new view. The columns are not very perfect, being more like those of Fairhead than of the Causeway. Another point, Cape Pillar, is a still finer basaltic headland, but of this we had only distant views. Port Arthur is a place of extreme beauty, though the den of thieves.

March 7th. I took an excursion to Eagle Hawk Neck, a narrow strip of sandbank which unites Tasman's Peninsula to the other. It is fifteen miles distant from Port Arthur. My friend and host, W. A. H. Boyd, furnished me with a brisk little pony, which carried me very pleasantly there and back. For the first nine miles, the road, a bridle-track, is carried chiefly through a dense forest of tall trees, with a thick undergrowth of bushes, and rank grass and sedge. One of the sedges was a giant of its kind, growing twelve to fourteen feet, with tall brown panicles of flowers. The road brought me to the shores of Norfolk Bay,

where is a convict depôt. From this spot to the Neck (about six miles) the road is carried along the shores of the narrow inlet which so nearly forms an island of the peninsula. It is from two to three miles wide, but in some places less. As I neared the Neck I passed sentry-boxes, placed at intervals, each guarded by fierce and noisy dogs chained to their tubs. Proceeding onwards the passage reminded me of the "Pilgrim's Progress," for every few yards I was saluted with a "bow-wow-wow" and a sulky show of teeth, by dogs which were tied to bushes close to the sides of the road. These precautions are to prevent the escape of convicts, by giving timely warning to the sentinels; and lest the unfortunate runaway should elude all these Cerberi, a line of dogs, each a few yards apart, is drawn the whole way across the Neck, a few also being placed on stages erected in the water. A row of safety lamps, for night, also extends across, while close behind these walks the sentry, and thus the runaway is kept from crossing over. Boldly passing the sentry, I inquired for the officers' quarters, and alighting at the cottage of Lieutenant G. of the 99th Regiment, the officer then in command of the party, I presented my letter of introduction—was asked in, and introduced to his wife and family. We had luncheon, and Lieutenant G. then offered me the choice of a *walking stick* from a huge bundle, which must have contained over a hundred —all different, and of his own making. Many were from Norfolk Island, where he had been stationed, and some were very curious and handsome, but I modestly took only a very plain one, and thus armed, we set off for the shore.

A walk of an hour brought us to the first curiosity, which was a spring of water that never dried up—a great recommendation in Australia. Here Mr. G. had placed a rustic seat, and had cut steps in the rock leading to the spring, the water of which trickled in a feeble thread. He had also "planted" a broken tumbler under a bush, and now requested me "to taste the water and declare it to be excellent," which I did. We then pursued our walk for half-an-hour by a path this "Man of Ross" had cut for more than a mile through a thickly tangled scrub, for the use of travellers visiting Tasman's Arch, the next *lion*, which is a large square chasm in a field, into which the sea rushes under a lofty arch of rock, at the depth of about a hundred feet. It is a fine bold object.

Returning to the beach, we proceeded to the last wonder—a sort of "blow-hole," or puffing hole, not at all equal to ours at Miltown. Here I found a curious little seaweed in such profusion that it made the sea, not only red, but thick, the waves coming in *like billows of raspberry jam*, each plant being about the size and appearance of a crushed raspberry. Lieutenant G. told me he had often noticed it in this one spot, and nowhere else.

Retracing our steps, we then walked a mile along the opposite beach, to see some flat rocks which are held to be a great curiosity. They form a sort of flagged pavement. I expected to see a second Giant's Causeway, but it proved to be only an expanse of (I think) compact sandstone rock, with a very regular cleavage, like a flagged pavement. The stones can be, and are, lifted out of their places for building purposes, smooth and squared. This ended the wonders, and we returned to his hospitable quarters, where I had dinner, and then, mounting my pony, rode back in the cool of the evening, after a very pleasant day.

A day or two afterwards I made a water excursion in a little "dingy," manned by a convict, to the *Dead Island* at the mouth of the little harbour of Port Arthur. This is the general cemetery of the station; both convicts and residents are buried there, but at different ends of the little island. There is a walk through it, and a great many graves with headstones, and others nameless. Several had rhyming inscriptions, some of them very quaint. I copied two. This is the record of John Sampson, late barrack-master, who died in 1847.

"To arms! the friends of Temperance cry,
With courage to the rescue fly,
With sword of truth, and for defence,
The shield of Total Abstinence."

The other is on the infant daughter of Sergeant Frayer. It is better poetry than most of the rest, and struck me as peculiarly appropriate to a *convict burial-ground*.

"Beneath a sleeping infant lies,
To earth whose ashes lent,
More glorious shall hereafter rise,
But not more innocent.

"When the archangel's trump shall sound,
And souls and bodies join,
What crowds will wish their lives below
Had been as short as thine."

My principal object in visiting the island was to explore the shores with dragging-nets for Algæ. I proceeded round the harbour, dragging with various success. We were terribly plagued with the huge floating kelp of this country, which *would* get tangled in our hooks and hold us fast, so that we were often baffled. However, I collected some good specimens. In the evening we had about an hour's "*sport*" catching crayfish, a large animal resembling a lobster, but more thorny, with smaller claws, &c. We moored the boat to some of the kelp near the cliff, where the water was twenty or thirty feet deep, with a clear bottom. All had nets fixed to round hoops, which were let down, a bait was put in each net, and the crayfish came nibbling round, and when one got over the hoop into the net, the rope was hauled in and the prize secured. The water was so clear we could see all that was passing below. Excellent eating they proved to be. I should mention that the boat's crew consisted of six convicts under sentence, and that the steersman and a constable in charge were armed with loaded revolvers, to maintain discipline. Howbeit you would not have known this without being told, as the crew were very civil and attentive, assisting me in seeking for seaweeds, and anxious to procure me good specimens. One of the convicts in fishing hooked a small shark, which he immediately cut open, and extracted a pair of *eggs* (mermaids' purses), which he presented to me, and which are now on the way to Trinity College, Dublin, on board the Rory O'More. Next day being Sunday, I went to the convict church. The discourse in the evening was on the parable of the unjust steward, which I thought rather a queer subject to select for such a congregation, where so many "artful dodgers" might, if they listened at all, rather chuckle over the story than profit by it. Many were very heavily ironed, an iron chain being fastened round each ankle and linked to their waistband. The clanking of chains, as they shifted their positions during the service, had a strange effect, as it had also to hear men thus heavily ironed singing "The Evening Hymn" of our Prayer Book. Yet you

might say, Are we not all tied and bound with the chains of our sins, and often as unfit to utter that hymn as many of those poor creatures?

I also visited the new prison on the silent and solitary system, where none but the worst criminals are kept, and those only for limited periods. The hall, from which radiate three wings or corridors, is surrounded by a number of exercise yards. Along the corridors are seventy cells, fifty-five of which were occupied. Each cell, which is lofty, and fairly lighted from the top, contains a table, chair, store, and shelf to hold books, bed, washing materials, &c. The beds are rolled up by day. All is kept beautifully clean. The men never see each other from the time they enter till they leave, and are never allowed to speak, except in case of great necessity, to the attendant, and then only in whispers, all ordinary communication being carried on by signs, as though they were deaf and dumb. Their food is taken in through apertures in the doors. I heard of two brothers who were confined for over a year in neighbouring cells—only a wall between them. They marched to chapel every morning and evening together, and sat there side by side, yet the management is such that neither knew his brother to be his fellow prisoner. When they leave the cells for chapel or exercise, each man has a cap drawn over his face, and the chapel seats are so arranged, that while all the countenances are visible to the clergyman and an officer in charge, the convicts can only behold these two faces, without obtaining a glimpse of their fellow prisoners. It is thus during the whole of their term. They are permitted one hour's solitary exercise each day. Their fare is a half ration, without tea or tobacco. Perfect silence prevails. The floors are of sandstone, but to prevent footsteps from being heard, a carpet is laid along the centre of the hall, which is kept lighted during the night, and there is also a lamp in each cell. Through a spy-hole in every door the officer can see the prisoner, without his being aware of the inspection. There is a library for the use of the inmates, which consists chiefly of moral and religious books. We peeped into a cell, and saw a man reading at his table. The severest punishment inflicted is to lock up the delinquent in a dark cell, which in a few hours generally brings the most refractory to order. Some trades are allowed to be exercised, such as shoe-

making, cobbling, and tailoring, but no noisy one is permitted. The system is said to work well.

I paid a visit to the quarters occupied by W. S. O'Brien when prisoner here, and thought them very comfortable. The cottage, comprising two rooms and a closet, is built in a garden on the slope of a hill, commanding a very pretty prospect, and had quite a cheerful aspect. He was supplied with books and writing materials ad libitum, and on the whole was much better off than John Bunyan in his "den," so might have borne his lot without grumbling. I was told that he worked in his garden, which had beautiful shrubs and flowers."

Dr. Harvey remained at Port Arthur for about ten days, which he employed in visiting various localities on the shores of the peninsula. He then returned to Melbourne, which he finally left for Sydney on the 1st of May.

"We steamed," he writes, "close along the shore, and in the afternoon began to watch for Port Jackson. The cliffs along the coast are very grand and bold, being from two to three hundred feet high, and the entrance to the harbour is wider than I had anticipated. I wonder Cook should not have been tempted farther in, for once within the heads, the prospect is extremely beautiful.

"I was amused with the grotesque appearance of the Norfolk Island pine, of which there are many large specimens around the fort and in the town of Sydney. This tree is in its growth so perfectly formal and regular, that it looks more like an artificial than a natural production, and constantly reminds me of the conical and comical little green trees which belong to the child's toy called 'a sheep-cot.' Seen at a distance they have exactly this character, but on a near approach the sense of formality is lost in the beauty of the foliage.

May 4th. I visited the Botanic Garden, in order to call on Mr. Moore, the curator. The garden forms part of the government domain, and contains thirty acres of handsomely diversified ground, fronting the bay. The shrubberies are beautiful, and many of the conifers are cultivated. Some of the larger Norfolk Island pines are a hundred feet high.

I also called on Dr. Bennett, author of "Wanderings in New South Wales," who is a surgeon in large practice, and who has a very fine library, containing many works on natural history,

to which he is attached as an amateur. He has contributed to various periodicals, and has given authors much valuable information as to the animals and plants seen in his travels. It was he who procured the first living nautilus seen in England. Books abound in every part of his house, and folios lie on tables and chairs. I was very kindly received, and spent a pleasant evening with him, chatting of fifty different things.

May 9th. Moore took me a drive to the heads of Port Jackson, to show me something of the bush. We went out by a road bordering the marshes, where Sir Joseph Banks first botanised here. I filled my collecting box with a few things, but not to much profit. However, the day was a very pleasant one, and may be marked with white.

On another excursion, returning at dark through the woods, we were attracted by a number of very luminous fungi, which shed a broad glare of light among the grass and decayed leaves. This light was very *white*, like *ghostly moonlight*, and so strong that I could see the time on my watch. I gathered some, and found them to be *agarics* (mushrooms) some inches in diameter, with a flattish, wavy, pale slate-coloured or whitish cup, very numerous thickly-set decurrent gills, and a solid, curved, and frequently eccentric stalk. I brought them home, and they retained their lustre till decomposition set in. The light was strongest when the fungus was in its best condition, and fully grown. I have since found the same agarics abundant in other places.

One of the few curiosities at present displayed in the museum at Sydney is in its way a strange one, which was dredged in the harbour. It is a ginger-beer bottle, to the neck of which several oysters have fastened themselves, and one has laid hold of a tobacco-pipe, round which the shell has grown, and he holds it in a knowing attitude, like any other gentleman.

Dr. Bennett has been very kind, and insists on my becoming his guest while I remain here.

May 10th. Saw Mr. Boyce the missionary, and in a few words arranged with him for a passage to the Fiji Islands, in the schooner John Wesley, which belongs to the mission, and is employed in carrying supplies and conveying the missionaries from port to port and station to station.

May 11th. Rode on horseback with Mr. Moore to Botany

Bay heads and back, about fifteen miles out and home. In some of the shallow tide-pools I collected *Martensia elegans* (one of the pretty networks now first found here), and I also picked up a *Coralline* and a *Conferva*. Most of the rocks, however, are quite barren.

May 12*th*. Visited Mr. McLeay, the celebrated entomologist, and author of what is called "the circular system," of which (once upon a time) I was an admirer. He has a fine house in a beautiful park of sixty acres, all within the city of Sydney. He cultivates many rare trees, shrubs, and plants, and from his grounds there are charming prospects.

May 16*th*. Left per steamer for Newcastle, built at the mouth of the Hunter river, and the great outlet of the coal district in New South Wales. We arrived next morning just before sunrise, a golden light suffusing the whole eastern sky, and the thinnest thread of a moon that ever I saw. On the strand, facing the open sea, of a small island called the Knoddy, I gathered a few Algæ, amongst them the rare *Delisea pulchra*. While here I had a walk with Mr. Moore to a fern valley about four miles distant from the town. Our route for almost the entire way was along the seashore. Part of the track led us over some hills by the margin of the cliffs, the views from which were varied and beautiful—a bold coast to the southward; and northward a long sand beach and distant mountains. The valley is a narrow wooded ravine, with a stream running through it, among large rocks and blocks of stone. Trees of many kinds arch over the water. The most striking objects, however, were the huge masses of *Asplenium nidus*, and *Platycerium Alcicorne*, two most noble ferns, which fasten themselves on the trunks or branches of trees, or take possession of jutting rocks. Many other pretty ferns covered the soil, climbed up the trees, or stuck on the faces of flat rocks. Of all I collected specimens. We had heard there were twenty kinds in the valley, but I don't think we found much over a dozen. Many *Epiphytical Orchideæ* were scattered about. None were in flower, but from their abundance they must, in their season, be beautiful. We saw in a tree one of the large opossums called the "*Native bear*." He kept quietly looking at us for some time, and then getting among the leaves, remained motionless while we were in view.

The following day I went dredging, but without profit. By favour of the governor I had the use of the harbour-master's boat. The crew consisted of two New Zealanders and two South-Sea Islanders, capital boatmen. I spent another day collecting Algæ and shells, and found a plentiful stock of *Delisea pulchra*, which is a deep-water plant, and only cast up after storms.

Before leaving Newcastle I went to Hexham, ten miles up the Hunter river, to visit Mr. Scott, who lives on an island containing about 3000 acres, the greater part of which belongs to him. He came in his boat to meet me. He has a very pretty cottage and garden. In front of his door stand a pair of fine Norfolk Island pines, and near the house were date-trees in fruit. Behind it a garden of orange-trees, numbering 1100, the fruit of which sold last year for 700*l*. I found him a most agreeable, well-informed, educated gentleman, and with two clever and accomplished daughters reared (like Miranda) on the island. Their chief amusement is finding and rearing caterpillars and taking drawings of the moths and butterflies that come from them. They have many exquisite drawings of these insects in all their stages, from the eggs to perfect growth. Mr. Scott is preparing a work on the Lepidoptera of Australia. He gave me a box of shells for the Museum, Trinity College, Dublin, chiefly from Moreton Bay. I returned the following morning to the house of my hospitable friend Mr. Bennett at Sydney, and busied myself in preparing for my voyage to the Fiji Islands; my object in going thither being the opportunity thus afforded of visiting some of the coral reefs in the Pacific. I expect to be four months among this group and that of the Friendly Islands.

CHAPTER XV.

NEW ZEALAND.—FRIENDLY AND FIJI ISLANDS.

The John Wesley sailed from Sydney on the 15th June, 1855, and arrived at Tonga on the 26th of that month, after a delay of about a week at Auckland. Being the winter season the voyage was rough and disagreeable. Dr. Harvey's companions on board were Mr. Thomas, the Wesleyan missionary, and one of his fellow-labourers; and the estimate he formed of these pious and devoted men caused him to search into the history of their mission work, and to witness with the warmest interest its wonderful results. There is little to be taken from what he calls "the mere tantalizing scrap of a tour" that comprised his "acquaintance with New Zealand," which, like the shadowy island of O Brazil in the legend of the Miltown fisherman, had been his "phantom of pleasure seen distant in youth."

"About breakfast-time," he writes, "we passed 'The Poor Knights,' a number of high, rocky, and craggy islets, poor enough in all conscience, and many similar ones were passed in the course of the day. The whole scene was very wild and dreary, and I only ran up on deck occasionally, and then down shivering to my nest to get warm again. All the day we were running close-hauled against a strong southerly wind. The same bleak and rugged character, as far as we could see, marked the coast, and it looked anything but inviting to a settler. In the afternoon we passed a large island called the 'Great Barrier,' and we were then supposed to be at the mouth of the 'Thames,' but it was rather a very wide arm of the sea, forming a deep bay, that we entered. Heavy squalls, accompanied with rain and forked lightning, proved a clearing up of the weather. It was dark when we anchored in good shelter about ten miles

from the Heads, and in the morning, which was bright and fine, but very cold, we beat into the harbour.

"After having established myself at the Masonic Hotel, I called on Dr. Sinclair, the Colonial Secretary, to whom (he being a botanist) I was well known by name. He received me very warmly, and after chatting some time, proposed a walk to Mount Eden, a crater cone behind the town, about 400 feet high, from which there is a very extensive view, the object being to show me the localities at a glance. Just where Auckland is built, the distance from side to side of the island is only six miles, and on either hand many long arms of the sea penetrate the land, forming splendid harbours. The country is bare of trees, and resembles the bleaker parts of Ireland and Scotland. The New Zealand flax grows abundantly everywhere on the hill-sides, and is now in seed. Where the land is cultivated the green fields had to me a home-like aspect. The country is volcanic, and many old craters are scattered about. Formerly the cove craters (which look like Irish Raths) were strongholds of the natives, but about forty years ago a tribe inhabiting the northern end of the island came here and fought with the Auckland tribe, till they left none remaining, and so the craters are now grassy mounds, though with traces of former occupation. The natives about the town are all in a civilized state, though some are still tattooed.

"On the 20th I called on the Rev. Mr. Lloyd, brother to Dr. Lloyd, Trinity College, Dublin. In the afternoon Dr. Sinclair proposed walking with me as far as St. John's College, six miles from town, near which Mr. W., son to our King George's Sound friend, has a farm, where I was to spend the night and following day. We had a very pleasant walk, the way being enlivened by Dr. Sinclair's anecdotes and cheerful conversation. I found the W.'s settled about half a mile beyond the College, and I was warmly welcomed. Round their house are several large specimens of the dragon-tree of this country; a singular-looking object, each of its snake-like branches being crowned with a large tuft of leaves. Its flowers, now gone to seed, are very fragrant. On Sunday, July 1st, I attended morning service with the W.'s at their village church, and in the evening walked to town for evening service at St. Paul's, where Mr. Lloyd's voice had a *home* sound to me."

July 2nd. Went with Captain Drury (to whom I brought letters from Admiral Beaufort) to the north shore of the harbour, collected some shells, and found a small, but curious Alga (*Microdictyon*), new in this place; generally speaking, the rocks, which are thickly studded with oysters, are poor in Algæ. Captain Drury is in command of a surveying vessel, and has promised to collect for me some things which I cannot now obtain. On the 3rd he took me to a curious volcanic island, Range Toto, forming the south head of the harbour, a cone 600 feet high; the surface cindery, the cinders in many places large, and heaped together in the wildest confusion; fields of oysters, but scarcely any Algæ. Dr. Sinclair and Captain Drury have been most kind, and I have also found a fellow-worker in Mr. Knight (Auditor-General), who has a fine microscope, and is an excellent draughtsman, and who is to send me drawings and specimens of the smaller Algæ.

July 6th. Walked to a valley where were some tree-ferns, but only a few were in their season of beauty. I gathered seeds of two species, *Cyathea medullaris* and *C. dealbata*. The first is the noblest tree-fern I have ever seen. Its trunk (in the dense forests) is often seventy feet high, but from twenty to forty is the highest I saw it. The crown consists of twenty or more huge fronds, each of them from twelve to eighteen feet long; the stalks are as black as ebony, and as thick as a man's wrist, and the feathery fronds curve over most gracefully. The *C. dealbata* is a smaller and more slender species, with the under surface of the leaves white, contrasting well with the dark rich green of *C. medullaris*. *Dicksonia Antarctica* (the Van Diemen's Land tree-fern) was also abundant in this valley, but it looked poor and stunted beside the graceful *Cyatheas*. By the bank of the rivulet *Lomaria procera* grew splendidly; its fronds eighteen feet high. *Trichomanes* were there, but not in fruit. One of the handsomest of the smaller ferns was *Todea pellucida*, twelve or fourteen inches long; transparent and delicately feathered. There were but few flowering plants, except a *Leptospernum*, resembling a small myrtle, which covers all the hills around Auckland.

Next day I visited Hobson's Glen, a similar locality about two miles distant, where were groups of superb *Cyatheas* of all ages, and pitched in picturesque situations. A variety of trees

were mingled wildly together, the dragon-tree standing here and there, and a little stream with tall reeds ran at the bottom. How delighted Mr. Ward would have been! Moreover the stream at its outlet was full of water-cresses, on which I made my luncheon, and thought of my spring breakfasts at the Quay. On the whole the botany here was poor in species, but this is the best remaining spot near Auckland; the real forests and glens are too far away for my limited time to allow of my exploring them.

8th. (Sunday.) I had the pleasure of hearing the Bishop of New Zealand preach at St. Paul's a very eloquent sermon, delivered with much earnestness and fervour. He had only just landed from England."

The vessel left Auckland on the 15th of July, and on the 26th Tonga Taboo, the chief of the Friendly Islands, came in sight; "its low, flat shores," he writes, "clothed with groves of cocoa-nut, and its white beaches washed by an intensely blue smooth sea." I have only time at present to say that I am most hospitably entertained at the Mission-house, and everything done to make my stay profitable and agreeable. I already feel much interest in the missionary work here; and although the labourers are Dissenters, I have unity and sympathy with them. I think they are working in a Catholic spirit, and teaching broad Christianity; and so far their labours have been most successful. I shall have more time to write by-and-by from Sydney. In the meantime a book called "The Southern World," by the Rev. Robert Young, will give you an account of these islands.

I have nearly made up my mind to take the first vessel for Valparaiso, on our reaching Sydney, and proceed up the coast to Panama. Once across the broad Pacific, I shall feel almost at home. The voyage from Sydney to Valparaiso varies from one to two months. My friend Dr. Sinclair expects to accompany me, and I could not have a more agreeable or congenial companion.

Tongataboo, July 26th, 1855.

As Mr. and Mrs. Thomas were old acquaintances of the natives, they were surrounded on landing by a large crowd of all ages, anxious to shake hands and "jeoto ofa" (small is my

love), the usual salute for "how do you do." Though some were wild enough in appearance, they were all friendly and quiet in manner. Mr. and Mrs. Thomas have lived among them for twenty-five years, and have seen them pass from a savage, heathenish state to their present Christianized, and comparatively civilized condition. Some were fully dressed in European style, save the bare feet; but most of them had only a piece of native cloth or calico, wrapped round the waist, and reaching a little below the knee. Most of the grown persons, both men and women, have the hair cut short, their great desire being to make it grow coarse and strong. They brush it straight up, oil it plentifully, and rub in lime for hair-powder. This short hair gives the women a very masculine appearance, which is increased by their commonly large stature and coarse limbs. Some of the young dandies and dandyesses allow the hair to grow long, and when thickly anointed and brushed straight in all directions, the expression of the face becomes singularly wild and savage: such a head would make a capital sign for the Sun Fire and Life Office. Before the arrival of the missionaries, all wore their hair in the sun-like fashion; but now, those who are considered steady members of society cut theirs short.

Our walk from the beach to the Mission-house was through a shady lane, bordered with neat reed fences, and overshadowed with cocoa-nut, orange, banana, bread-fruit, and other broad-leaved trees. On one side were the *Palace* gardens; on the other the enclosures of the town. There are no streets, but a succession of small enclosures called Abis, each having one or more houses on the enclosed space. The only noise heard in passing through the streets was the hammering of the tapa, or native cloth; a noise that begins before daylight every morning, save Saturday and Sunday, and continues unceasingly until nearly dusk in the evening. It is like the distant sound of beetling engines, or the rivetting of iron vessels in a ship-builder's yard. The making of this cloth is the principal occupation of the women. The material is the bark of the Chinese paper mulberry, which is hammered and dressed till it is converted into a sort of tough felt, like paper, which is then painted. Before the introduction of calico it constituted the entire clothing of the people. It does very well in dry weather,

but will not bear rain. I took up my quarters at the Mission-house, where we were hospitably received by Mr. and Mrs. Davis. Soon after we had got settled, Mr. Thomas proposed a visit to an old chief named Abraham, uncle to the King, and who acts as Governor in his Majesty's absence. We found him at home, but not being well, he received us in his bed-room. The house was a rude shed, consisting of two rooms, the inner one being the sleeping apartment. He was squatted on the floor, dressed in a web shirt and drawers, and with cotton gloves. He was a pleasant-faced old gentleman, with frank manners, but not ill-bred. We stood in the outer room, and he sat in the doorway of the bed-room. Pigs, dogs, and people (his retainers) had free access to the outer room, in the middle of which was a fire. There was but little furniture—a sieve, a Cava bowl, and a pot or two. We afterwards visited Shadrach (the chief justice), who bears a high character for worth and talent. His house was much more comfortable than Abraham's, and better furnished, and there were more European luxuries. The inner room had glass windows. In the outer was a frame hung with coloured glass bottles (of scented oil); there were also other ornaments. The house itself was neatly built in native fashion; that is to say, like a very large basket turned bottom upwards; the walls reeded, and the framework of the roof supported by cocoa-nut pillars. There is no good water on the island, so those who are particular are obliged to catch the rain in troughs and tanks. As we went along from house to house, the children of the village ran after us, every now and then coming up to shake hands with us, and smiling in very friendly fashion. Such was my first day's experience of the Friendly Islands; and I may add, that so far I have found the natives wonderfully well-behaved and civil, not crowding on you or teazing you as in Ceylon, but keeping back as soon as they understand that you wish to be alone.

27*th*. I walked out on the coral reef opposite the landing-place. It fringes the whole north side of the Island, in some places extending a mile or more from the beach. A great part of the surface was worn and dead, but in the pools the coral was alive. Near the outer margin of the reef, these pools were numerous and deep, and in them many beautiful corals were growing luxuriantly. They were various: some branching or

leafy, others knobby or massive; some bushy, some tree-like or saucer-shaped on huge disks; some sessile, others on stems. The colours varied from white to brown, purple, green, yellow, flesh-coloured, and dull red; and many reflected rainbow tints, changing with the angle, particularly at the tops of the branches. The water was clear as air, and through it multitudes of little sapphire fishes (*Coloto*) darted among the coral branches. Sea-weeds were very few, and almost all of the green order, amongst which were *Halimeda* and *Bryopsis*. Star-fishes of the long-armed class (*Ophiura* and *Ophiocoma*) were abundant, and a large brown feather-star was frequent under stones. Great, black, ugly sea-cucumbers (*Holothuriæ* or Trepang) were crawling everywhere. I caught at one, which immediately threw out multitudes of long, blue, shiny, slimy threads that coiled round my fingers. I dropped the brute, but had some difficulty in getting my hand free: it did not sting me, however. I picked up a *Cidaris* and an *Echinus* (urchin), and saw another species of the latter which I did not venture to touch, remembering how I had been stung by one (I think the same species) at Key West: it has long, slender, and very brittle spines, covered with highly poisonous slime. Near the edge of the reef *Nullipores*[1] abounded in places left bare at low water. I noticed that some of the living corals were bare also, but probably they did not long remain so, for it was a low spring-tide. A huge and beautiful species of *Alcyonium* (a soft coral called dead man's toes) grew where it was left exposed at low water. In this state its substance shrank up under the sun and became of a pale-brown or sponge colour, but when its *animals* were expanded under water, this lobed, fleshy mass was thickly spangled with golden stars, and looked very lovely. Several naked *Mollusca*, of gay colours and beautiful forms, glided amid the corals, but I could only do them homage, and release them again. There were besides, countless soft creatures allied to sea anemones; in fact, quite an *Allmanic* paradise. I found but few shells, and these, for the most part, rough and common.

28*th*. No beating of native cloth to-day, the women being busy preparing their food and cleaning up for Sunday, besides liming and oiling their hair and otherwise beautifying them-

[1] For a description of this race of corallinc-like plants, see "Sea-side Book," page 120.

selves for the day of rest, which is rigidly observed by all. To-day was bright and fine, and I walked on another part of the reef, where I observed in one place an extensive field of coral, recently dead, standing a few inches out of the water, as if, within a short period, the bed had been raised sufficiently to kill the coral animals; a thing not impossible in these islands where earthquakes are common. Here the *Nullipores* were plentiful, but the other Algæ were few and far between, and there were few shells. In the evening the voice of hymns came up from all the scattered houses of the village.

29*th*. (Sunday.) In the morning I attended the service for the natives, which consisted of an abridgment of the Liturgy, with hymns, extempore prayers, and a sermon."

The history of the conversion of the Friendly and Fiji islanders, from the darkest state of cannibalism and heathen barbarity, to that of comparatively Christianized civilisation, has become so well known since Dr. Harvey's visit, that the details of his journal in this respect have lost much of their freshness. The sketches, therefore, here presented to the reader will be confined chiefly to such as have a personal relation to his six months' residence and explorations. A letter written at this time to Mr. Ward will sufficiently show how deeply he was impressed by what he heard and witnessed concerning the natives, and his anxious desire to aid the missionaries in their good work as far as lay in his power. His appeal regarding the medical fund was at once responded to, and the supply of medicines kept up till within the last few years, when its continuance was believed to be no longer necessary.

To N. B. Ward, Esq.

Tongataboo, Friendly Islands, July 29th, 1855.

My dear Ward,

I have become much interested in the missionary work which is now going on in these islands, since I have seen for myself some of the fruits already gathered in by the Wesleyan Missionary Society. You know my predilections are not in favour of *sectarianism*, and hitherto I have abstained from supporting any but the missionary societies of the English Church; nor should I now depart from this line of conduct, did

I regard the Wesleyan Missionary Society as a *sectarian* body. Here at least the mission is conducted in a truly Catholic spirit. The natives hear only the plain unadulterated Gospel which we all receive, nor would they be aware (but for the presence of a Jesuit mission among them) of the unhappy differences which have rent the Christian Church. The missionaries take the New Testament in their hand and expound the truths of Christianity in their fulness and broadness; not troubling the natives with curious questions and speculations. They have also translated into Tongese, an abridgment of our noble Liturgy, which is always used in the chapel service. The result has been the *total* extinction of heathenism in these islands, accompanied by a change in manners truly wonderful, considering the short time that the mission has been established. The last human sacrifice occurred but fourteen years ago. Previous to that time they were common, and always on the death of a high chief; either one of his children or wives was strangled, and others of his relatives often maimed or grievously wounded. At that time also, the natives, notwithstanding their "friendliness" to strangers, were thieves and liars, and though less savage than the Fijians, were living in the habitual sins of heathenism. Now, they are a quiet, peaceable, and well-ordered Christian community, and many have given unmistakeable evidence of the reality of their conversion, and become able assistants to the missionaries in carrying on the work of Christianization. Recently (in comparison) the Society has established a mission in the Fijian group, where already the converts number 10,000, including several chiefs. The Fiji Islands are said to contain nearly 200,000 inhabitants, and those not yet under missionary care are savages of the *worst* character. They are cannibals to a fearful extent, *habitually* feeding on human flesh; not from revenge or from necessity, but because they *prefer* it to other food. They eat their enemies or prisoners when in their power; but, if unsuccessful in catching these—their lawful prey—they will cook their own wives or children. Not long ago a case occurred at Fiji, when a wretch ordered his wife to heat the oven, and when she had heated it she asked him, "Where is the food?" "You are the food," was the savage reply, when he instantly clubbed her, and then cooked her for himself and the party.

The captain of the vessel tells me that the last time he was in Fiji, in 1847, he saw a hundred human bodies laid out at one time, ready for cooking at a great feast. Sometimes they cook a man *whole* (which they call a "*long pig*"), then put him in a sitting posture, with a fan in his hand, and ornamented as if alive; and thus they carry him in state as a grand head dish for a feast. Others chew little bits of raw human flesh (as sailors chew tobacco), and put them into their children's mouths. If this picture be not sufficiently revolting, I must refer you to the published reports of the Wesleyan Missionary Society, where you will find plenty of similar or worse accounts—accounts which I have heard confirmed by many witnesses not connected with the mission work. Now picture to yourself a people like this, numbering perhaps 200,000 souls: see a small band of missionaries, with their wives and families, going and sitting down among them with their lives in their hands (literally "a living sacrifice, holy and acceptable to God"), and thus remaining on without *human* protection, through evil report or perhaps persecution, for years and years, seeing scarcely any fruit of their labours till their heads are growing grey, or until some of their number have been laid in a Fijian grave. And then behold this same mission, after twenty years' labours, appealing by its 10,000 converts to the sympathies of a Christian world. Contrast these pictures, and I think you will join with me in praying that God may prosper this great work, and that speedily.

So far for my preface, and now for my main object, which, when I have stated the case, will explain my reason for writing all this to *you*, instead of to some other of my friends. I find that the missionaries here, and at the other stations, are in the habit of distributing, at an almost nominal charge, large quantities of medicine; these being entirely provided by the devoted men out of their slender pittances. The funds of the Parent Society, though large, are so overburdened, that no assistance can be given in this respect. The missionaries therefore must continue to bear this expense themselves, or see the poor creatures round them suffering and dying without assistance. I need hardly add that the ability to minister to disease is a valuable aid to a missionary's more especial work; indeed, in my opinion, so much so, that all persons educated for missionary work ought to receive a proper medical training; and

if possible medicines ought to be *supplied* to the missionary in such quantities as to enable him to distribute gratuitously in case of necessity. At present, as I have already said, the medicine chest is a very serious annual expense, and particularly so as the missionary is often obliged to purchase in Sydney, at the extravagant colonial prices.

Now my object is to try and raise a small sum among our personal friends to be laid out in medicines either by you or by Mr. Deane, through whose connection with the medical profession, we might be assured that the supply would be of the best quality, and at the lowest possible wholesale price. With the aid of our mutual friends in Dublin and London, I think we might be enabled to furnish both the Tonga and Fijian mission with medicines for a year or two at the least, and should the fund thus raised prove, by the blessing of God, greater than we look for, perhaps it might be the means of a little "Polynesian Medical Aid Society" being established, which by an annual contribution to the missionaries might enable them to dispense medicines gratuitously.

And now, my dear friend, I leave the matter in your hands. Make what use you please of this letter. You must not suppose, however, that I am turning "*Methodist.*" On the contrary, I honour and love the truly Apostolic branch of the Church Catholic, to which we both belong, above every other *phase* of Christianity, believing that with "all her unhappy divisions" she bears the truest witness to her Lord, and has her lamp trimmed with purer oil than burns in any other. But let us remember that "He that is not against us is for us;" and here at least (and I trust in many other places all the world over) the Wesleyans are doing the Church's work, to the utmost of their ability, and seem to me to be peculiarly adapted by their organization for usefulness in a field like this. Therefore, I bid them "God speed!"

Believe me,
Ever your affectionate friend,
W. H. HARVEY.

July 31*st.* Left Tonga on a cruise with Mr. Thomas to visit some out-stations. We started with a light breeze and proceeded over a smooth sea, threading our way between the

numerous outlying coral reefs. I employed myself on deck with cleaning shells. We passed Hunga Tonga and Hunga Habai, and by sunset were near the volcanic Tofua, which was smoking.

August 1*st*. About sundown we got under shelter of the little island of Haafeva, about thirty miles from Lifuka, which was our destination. The night was very fine, the stars most lustrous: Venus at one side of the ship, and Jupiter at the other, cast broad bands of light across the sea.

August 2*nd*. Our navigation became intricate, having to wind our way amid innumerable coral reefs, often passing so close as to see the corals in great beauty in the deep sea reefs, with fishes swimming among them. We at last succeeded in entering the harbour of Lifuka before sunset, but we remained on board for the night. Some canoes visited us, in one of which was a schoolmaster, by name Eliezar, a pleasant-faced, robust native.

On the 3rd we landed, and were kindly received by Mr. West. Although it was raining heavily, I was so anxious not to lose time, that I started with an umbrella to visit the south coast of the island. It yielded little except common shells and drifted Algæ. Where the coral rocks were somewhat elevated, they had become partially changed into porous limestone, not unlike that seen at Rottenest, West Australia.

On the 7th I went with Eliezar in his canoe to the little island of Ooaleva, which is connected with Lifuka by a reef, on which I landed, and sent the canoe round to meet me. I found it bare of living corals, and deeply sanded. The chief Algæ were *Calothrices* and *Lyngbya*, which covered the rock in wide patches. In some of the deeper pools near low water I found abundance of a beautiful red Alga (*Desmia*), previously seen at Ceylon, and in some of the shallow ones I collected another of my Ceylon Algæ, which I had then named *Valonia Forbesii*, in compliment to Mr. Forbes of Matura. Now when I again met with the plant I could not but associate it with poor Edward Forbes, which set me sadly thinking. I have also gathered a very curious and new Alga which, if not a new genus, is a very distinct new species of the singular genus *Dictyosphæria*. This is my first discovery at the Friendly Islands! I picked some shells, and on the whole had a very pleasant morning's work. I had come prepared with a few Tonga sentences written on

paper, and when I wanted to return, began with these to Eliezar: "Kuo-hua-mai ae tahi" ("Tide's coming in"); "Ke ta foki a" ("Let us turn back"). He was quite delighted, and asked me to tell him the "Bilitania" (English) for them; so I repeated, and he got them by heart; then laughing, and shaking me warmly by the hand, he cried, "Ah, you are my friend!" Afterwards he asked my name: I said William, and while walking up to the house on landing, I was amused by hearing him call "William!" He wanted me to stop, that he might help to carry my things. I found him very good-natured and obliging. He told Mr. West that he was "*killed* with the sun, but that William did not mind it; William was too busy thinking of Limu" (seaweed).

On the evening of the 8th we went on board the Wesley, having taken an affectionate farewell of Eliezar (who patted me on the back after shaking hands), as also of the crowd of natives of all ages who accompanied us to the beach. Next morning we sailed for Vavau, where I remain till the Wesley returns from the Navigator's Islands.

To Mrs. T.

Sydney, December 12th, 1855.

I reached Sydney a few days ago, after an absence on my island tour of exactly twenty-five weeks. My last letter was written from Vavau on the 17th of August, and after so long a break in the thread of my narrative I have hardly courage to resume in journal fashion. I remained three weeks at Vavau as the guest of the Rev. Mr. Daniels, by whom I was hospitably entertained, and helped forward in all I had to do with the natives. The harbour of Vavau is spacious, and the scenery lovely, for, being landlocked, it has the appearance of an inland lake, surrounded with hills and slopes at various distances; these being clothed with tropical vegetation of the fullest green, on which the changing lights and shadows fall. The cocoa-nut trees, rising with their slender stems over the smaller shrubbery, are very conspicuous, and the garden patches of banana contrast well with the dense jungle of the uncultivated spots. As I glided along the shores in a small canoe, I was often reminded of those of Killarney, the surface of the hard coralliferous rock being similarly waterworn into a fanciful honeycomb filigree. This rock

is often deeply covered with a plentiful supply of very fertile vegetable mould. There are no streams, and the wells, which, along the shores of the harbour, spring close to the sea, are all brackish, being overflowed at high tide. The missionaries collect rain-water for the table and for washing. The natives mostly drink the milk of the young cocoa-nut—a very different beverage from the vile stuff you find in the old nuts brought from the West Indies: the juice of the half-ripened nut plucked fresh from the tree is delicious, "a real fountain of sweet waters," always cool, even in the hottest day, so admirably has nature guarded it by a thick husk; but if the nut be kept many days after being gathered, the juice becomes sour. The natives mostly use the sea-water for washing, and the bark of a shrub nearly allied to *Rhamnus*, and which is common along the seashore, serves as soap. They wrap parings of this bark round the garment or piece of cloth to be washed, and then knead the article under water in washerwoman fashion, beating, pulling, and squeezing till a strong lather is formed, along with which the dirt oozes out. It is said, however, to rot the clothes from excess of alkali, but this may in part arise from the use of the sea-water.

The form of the hills in Vavau bespeaks volcanic action, and the whole island seems to have been slowly raised up at successive periods by a force acting below it. The rock appears to have been hardened by heat, but not to the extent of destroying its fossils. Close to the town a remarkable conical hill affords a beautiful and extensive view over a wide margin of sea, studded with small islands, and flecked with coral reefs, conspicuous at many miles' distance by the lines of white breakers which constantly mark their position.

Hardly had we reached the Mission-house on our landing, when a long procession of the natives was seen, slowly winding along the narrow roads, and singing hymns on their way. It was composed of men, women, and children, dressed in their best, and ornamented with leaves and flowers. None were empty-handed, every one bearing some offering of "mea ofa" (love things) in gratitude to the missionaries for their teaching. One carried a pig, others a yam, a piece of cloth, a fowl, &c. Some few brought money, and the children bore long wreaths, ingeniously made, of sweet-scented flowers. Our party stood before the

Mission-house to receive the presents, and as each was laid down the missionary said "faka fatai" (thank you), on which the natives often repeated "faka fatai Jesu" (thank the Lord), and then came forward to shake hands, in which I joined till I was fairly tired, so many hands were offered. I generally spent more or less of every favourable tide on the coral reefs, the general features of which I have already described. One day the mission families, including children and servants, accompanied me on an excursion to the summit of a high hill distant about three miles from the house, and on our return from ascending it we had a native pic-nic, my first experience of Tongan cookery. A message had been sent forward to a village near the hill, and the natives came out to meet us. They were told we should stop to rest on our return, and we then pursued a shaded pathway through a thick forest, gradually rising as it wound around the hills till we reached the top of the highest. The day was lovely and the view charming. On coming down to the village we seated ourselves under a tree to await the serving of the dinner. It soon made its appearance, and consisted of two pigs baked whole, and brought in baskets, being wrapped up in plantain leaves; we had also baked yams and taro root (*Caladium esculentum*), a kind of large arum plant, besides a native soup made from cocoa-nut, in the same manner as almond milk is prepared. Cocoa-nuts, both hot and cold, served for drink; the hot being taken during dinner, and the cold as a dessert. The whole repast was set before Mr. Daniel as the principal guest, and he sent portions to all in turn. My share was about a quarter of the smaller pig and a huge yam; like Benjamin's portion, five times as much as I could dispose of. The hot cocoa-nut milk was drunk out of little cups neatly made on the spot, by folding a young banana leaf, and leaves of the same useful plant served us for plates and dishes; while the ribs of the leaves acted as soap and water, brush and towel, all combined in one. Water however was poured on our hands after the repast to supply the want of finger-glasses. All the food was very cleanly cooked and very good, and we did it full justice with plenty of help from the natives, so that when we rose from table the two pigs and most of the yams had disappeared. We came home in the cool of the evening and enjoyed a cup of *hot* tea, the most cooling drink that I know of for a warm climate.

When the John Wesley returned from Navigator's Islands, we sailed for Tonga, where I was again heartily welcomed by Mr. and Mrs. Davis, and I made more addition to my Algæ both there and at Lifuka, which I again visited before going to the Fijis. At Tonga I met with a very remarkable star-fish of the pentagonal type, as large and as thick as a 4 lb. loaf of bread, but it has greatly shrunk in the drying, and is now quite flat and only an inch in thickness. Three others I have cut open and skinned, and have their skins and skeletons. In the stomach of each was a fish some inches long. How such a sluggard could persuade a lively and sensible fish to walk into his stomach is to me a mystery. I have two new genera of Algæ, and at the least three well-marked species of one of them.

On the 8th of October we started from Vavau on our voyage to the Fiji archipelago, and towards evening we sailed close by the island of Loti, now a volcano in fierce activity, though a little more than a year ago it had been considered by the natives from time immemorial to be a quiet, well-behaved island. It is, as is usual, conical, and in some places broad streams of lava rock stretch from the summit to the sea; while other parts where the fire had not reached were still green with the luxuriant foliage of the tropics. The natives report that since the volcano broke out, a large fresh-water lake has been formed where previously there was none such, nor were there either streams or fountains.

Our voyage though slow was pleasant and favourable. We reached our first stopping place, Lakemba, at daylight on the 13th, where we lay off and on during our stay, the shore being reef-bound and the waters outside the reef too deep to afford anchorage. The island is mountainous and very beautiful. I landed at the mission station and started for a walk, continuing my way over the tops of several hills till I came to a gully, wherein was a stream shaded over with shrubs and tree-ferns. I scrambled down and gathered sundry matters on its banks. The vegetation was very different from that of the Friendly Islands, being also more diversified, and to me more interesting. The decomposed volcanic matter, richly manured with the vegetable detritions of ages, forms a soil of exuberant fertility, which is also sunned, fanned, and well watered. The same may be said of all the other Fiji islands that I visited. They are

mountainous, picturesque, well watered, fertile, and pleasant to the eye. I found several plants on this occasion, amongst which was a very remarkable fern, *Polypodium Horsefieldii*, but I met with it only on one hill. Its leaves resemble those of cow parsnip more than of a fern.

King George of Tonga arrived the same evening that we did, with a fleet of thirty-five large canoes, carrying 2000 men besides the women and children. It was a very pretty sight to see so many double canoes sail together into the harbour; for though our vessel had to lie out at sea, boats and canoes enter through a narrow opening in the reef, into a small basin of still water. The double canoe at a little distance looks like a raft, on which a house is built, and it is driven by a huge top-heavy sail of matting. The crew and passengers cling all round and at top, as in a Neapolitan *calèche*, and a war canoe sometimes thus carries as many as 500 men. King George was on his way home, after having acquired much glory in helping the Fijian king to put down a formidable rebellion that had nearly upset his authority.

I landed at Vewa on the 17th, and had a botanising walk in the bush. The island is covered with timber, and the trees are well stored with Epiphyte orchids and ferns, many of which I gathered. At the Mission-house I asked for a guide, and was furnished with a man called *Koroë*, who climbed trees for parasites, gathered flowers, carried my bundle, and was very agreeable, and quite pleased when, at parting, I gave him a fourpenny knife. I asked whether the name Koroë had any meaning, and was told that it was a very honourable title, something equivalent to a C.B. in England, and only given to a person who had committed at least five murders.

On the 18th I visited Bau, the capital of Fiji, and perhaps the largest and best-built native town in the Southern Pacific. It is situated on a small island close to the mainland of Fiji, the insular situation having been chosen for purposes of defence. This town was the chief seat of cannibalism and devilry of all kinds, and perhaps has witnessed more savage crimes than any other spot of its size on the face of the earth. About two years ago, after a continual refusal for eighteen years, a Christian missionary was allowed footing here, and the change since that time has been extraordinary. The few temples that still stand

have been converted into dwelling-houses, but the greater part no longer exist; the idols are "utterly abolished," and the hateful crimes connected with that devil worship have ceased. One realizes them a *little*, when standing as I did on the spot where only eighteen months ago there had been a cannibal feast at which multitudes perished. Can you fancy a single unprotected man and his wife, with two small children, going to live amid such scenes, prepared to bear all things, to hope all things? Surely nothing short of the charity that *never* faileth could support any civilized person in such circumstances. But all-enduring charity is the germ of that great power which, like the stone cut out without hands, shall at length become a mountain and fill the whole earth. The great temple at Bau was accidentally burnt down, and all that remains of it is a double tier of upright stones, each from six to eight feet high, which resemble the Stonehenge architecture; a significant fact, recalling to one's thoughts what the state of England was, before the same Christianity, or "Lotu" (as the Fijians call it), came to her shores. I visited the king's palace, but his majesty was not at home, so we walked about the house and looked at his wares. Thakumbau (the king) is a man of considerable ability, and he has played a very distinguished political part in Fiji, but I fear his Christianity is of a low type; yet, bad as it is, it greatly influences the conversion and civilization of his subjects. We also visited the Lasekauan chief and some others. After leaving the group we had a very narrow escape of being wrecked on one of the many coral reefs. We were going along briskly with a fair aft trade wind, when we got into a deep bight of the reef not laid down in our chart. We had to beat out of the difficulty against the wind, through so narrow a passage, that breakers were a-head every time the ship tacked. Every one but myself was on deck. I heard the noise, and wondered what it meant; but consoling myself that I was "only a passenger," I turned over and fell asleep. In the morning every one was full of the story. Te Deum laudamus.[1]

[1] An interesting account of the wreck of the John Wesley on a coral reef in November, 1865, with the remarkable deliverance of the passengers (amongst whom were Mr. and Mrs. Davis) by the simultaneous occurrence of an earthquake, that caused the vessel to be heaved upon a huge wave, and placed within the reef, is given in the Wesleyan Mission Report of 1867.

Dr. Harvey's visit to the South Sea Islands, which in addition to constant bodily exertion, brought vividly before him so much matter for painful reflection, affected his health more than any experience incurred during the two previous years of travel. On reaching Sydney a presentiment of approaching illness hung over him, and the following letter seems to have been written under this feeling:—

To Mrs. F——r.

Sydney, New South Wales, December 13th, 1855.

My dearest L.

I felt so strongly drawn towards you last night as I lay awake unable to sleep, that I must write to you this morning. I accidentally awoke about midnight, and my thoughts recurred to the time of Christmas, now so near at hand, and of course I could not help recalling that of 1831 and my dear mother, and 1846 and dear S——. Then came to mind a little verse which I wrote when S—— was taken, and which I meant to have given to poor R—— at the time, but his grief was so violent that I was afraid to interfere, and so I never showed it to any one. I shall now transcribe it for you from memory, and you may send it to him if you think fit.

In Memory of Christmas, 1846.

The night is past, and thousand bells are ringing
O'er all the earth this happy Christmas morn,
And angel choirs are hallelujahs singing,
For joy that Christ to save the world is born.

Her night is also past—to her new risen
A morning without clouds begins to shine:
Her spirit, breaking from its earthly prison,
Now rests in perfect peace and love Divine.

Then let us too our chastened hearts lift up,
In sweet communion with the blest above,
To Him who drained for us life's bitter cup,
That He might fill it with Redeeming love.

I thought, as the old words came back to memory, that I could realise something of that sweet communion, and I felt tranquil and happy. Then came across my mind dear H——, as he lay "alone with God" in his tent that night. I asked myself what

if I should now be called, as he was, to go before the light of another day should shine. I involuntarily pictured him as also waking up suddenly at midnight, and similar thoughts of home and love, and of those that had gone before, coming to him, and with them memory of the hardships he had passed through and of those that seemed before him ere he could realise an independence; also of the many temptations that surrounded him while mixed up with such a loose society as that of a gold colony. I could then readily fancy the buoyant spirit so subdued as to be brought to feel the release a happy one, and as if his only trouble on that night may have had reference to his father and sisters and mother.

It seems no doubt as if it were a hard matter to be called on to die at so great a distance from all you love, and at so short a notice; but I believe (from what I have myself felt more than once) that all those circumstances lose their terror and bitterness, when contrasted with the prospect which the near approach of death awakens in the trustful spirit. For myself, I could have been well contented to have passed away last night, so firm was my reliance on Him whose presence seemed to be with me. Australia is as near the gate of Heaven as any other place. Therefore it does not become us to repine as those that have no hope, or to murmur because it has pleased a most merciful Father to hide his doings from us. His ways are not our ways, nor his thoughts our thoughts. Farewell.

The foreshadowed illness proved an attack of fever, under which Dr. Harvey was prostrated soon after sailing from Sydney, the effects of which continued until his arrival at Valparaiso. Here, with the same providential care which had attended him through all his wanderings, he met with friends in Dr. and Mrs. Ancram, and Mr. and Mrs. Alison, who administered to his recovery with all the attentions that the utmost kindness could bestow. To the last-mentioned lady he addressed one of his earliest letters after his return to Ireland.

CHAPTER XVI.

HOME LIFE AND CORRESPONDENCE.

Early in October Dr. Harvey reached home, after an absence of over three years. In November he writes to his friend Mrs. Gray: "I have now been a whole month landed, and I ought to have written to you, were it only to say that I am at this side of the world, and that I have not forgotten either you or my other friends in America." "I had hoped to have come home by the States, and just to have looked in on you, but finding when I reached Panama that I should have to wait a fortnight for a steamer, I preferred to push homeward, so as to arrive at the beginning of College term."

Meanwhile the chair of Botany had become vacant in Dublin University by the appointment of Professor Allman to that of Edinburgh, and Dr. Harvey was unanimously chosen to succeed him. The chair which he still held in the Dublin Society House was about the same time transferred to the Museum of Industry; and this change appears to have led to some increase of duty, as he tells Mrs. Gray that he is too busy to write letters, having, besides the drudgery of sorting and sticking his Australian Algæ, the prospect of having to give additional lectures, in consequence of the Professorship at Dublin Society House being converted into a Natural History and Economic chair. He mentions, moreover, his being requested by the College to give a Zoology course to the class formed for "Civil Service Cadets," and this in addition to his usual forty Botanical lectures. "A year hence," he adds, "I should not perhaps mind all this, but coming just now it is rather pressing, and I cannot say when I shall be able to take up my proper work. The first thing I shall then do will be to finish off the Nereis Boreali

Americana but I hardly look to touching it before the long days come round." After particular mention of some relatives he thus ends: "I find most of my other friends as I left them—the prosperous still prospering—the unfortunate still afflicted."

A tone of sadness pervades the letter, for the shadow of his sister's illness hung heavily over him. Her death took place about six months after, to which reference is made in the following letter:—

Trinity College, Dublin, 4th July, 1857.

My dear Mrs. Alison,

You will see by the edge of my paper that I have had since my return home to submit to a separation which is the most trying that could befal me—the death of my dear and only sister, with whom I have lived since I was a boy, and with whom was bound up much of my enjoyment, and the strongest remaining tie that bound me to home. She entered into all my pursuits with as much interest as if they were her own, and I naturally feel a blank which can never be filled up, and in many ways begin to find myself an old man whose ties are loosened, and who has nothing to do but to continue his course to the end, hoping for what shall be after the end, but not looking for much in the passage towards it, or greatly desiring a protracted period.

On my return I found my sister apparently in good health, but it soon after failed. She bore all her suffering most patiently and meekly, and from the first resigned herself to her Master's will without a murmur. She was beloved by all who knew her, even by the strangers who came to her house, or who met her casually. All this we can look back to, and then look forward to that future reunion after a short interval, "where there shall be no more sea," no more separation or tears. I was very glad to receive your letter this morning, and to hear of your safe arrival and pleasant reception among your friends after so long an absence. . . .

I do not wonder at your keen enjoyment of English *greenery*, after the arid country where you have been resident. Even I, from the "green isle" itself, am always struck with the superior beauty of English verdure, chiefly, perhaps, because the cultivation is so much better than with us, and that

England is a land of *hedgerows*, while the Irish farmers delight either in stone walls or in ill-kept dykes. The trees in England also have great beauty.

I should like to know whether G. appreciates the wonders she is seeing, so different from her former experience of life. You speak of the seaside place you are staying at as being "sleepy and lazy." If you want real seaside and bracing air, wild scenery and *rousing* inducements, you should visit some of our west of Ireland watering-places, where the Atlantic rolls in as grandly as the Pacific does in Chili. I do not much fancy *fashionable* resorts when I go to the sea. I like to be at a place where one can go about in straw hat and jacket, and carry baskets or bottles, or tin boxes, as the case may be. Some years ago I wrote a little book to assist young naturalists at the seaside, and I have desired my publisher to forward to your address by post a copy of "The Seaside Book," which may help to introduce G. to some of the marine plants and animals she may pick up in her rambles. If she finds any chapter too troublesome to understand she can skip it. In my next edition I must put in something about the *silver* in the water. I had heard from Mr. F. Field of his researches before I left Coquimbo, and seen a specimen of the silver. I also saw the notice in the "Royal Society's Proceedings," and more recently the popular rendering in Dickens' "Household Words," where the account given will, I think, divert your brother himself.

Yours very truly,
W. H. HARVEY.

To the Same.

Trinity College, September 17.

I am glad to get your letter, for I had been thinking several times these last few days that it was long since I heard of you. I hope you have been enjoying yourself among your friends in various quarters, and certainly you have had splendid weather for the purpose; and now you tell me that the *holidays* are nearly over, and you must go back to *school* (shall I call it?) in Chili: "a school for patience" it is at least, and so indeed is every colonial or extra-European residence to a person who has many connections in this hemisphere.

You ask me whether you can do anything for me in Chili,

and I say, get G. to dry wild flowers—not *scraps without leaves*, or *leaves without flowers*, which are worthless—but *specimens* fit to go into Herb. T. C. D., with a ticket like this :—

> *Alisonia Gertrudiana.*
> New genus and species.
> Columbo, Chili.
> W. H. H.
> July, 1856.

I left drying paper with Mr. F. Field, but if more be wanted, *old newspapers* will do perfectly well. Half a dozen pieces should be dried of each kind, if so many can be found. Small plants (annuals, &c.) should be plucked up by the roots, and dried in one entire piece. Specimens of larger plants should be broken in sizes from twelve to sixteen inches long. Two boards, and a big stone or half hundredweight, are all the apparatus required, and all the care, to give dry papers now and again in the process of drying. *Number* the specimens sent; keep a corresponding set, also numbered; and then I can send you the names, referring to a list of numbers.

During this and the following year Dr. Harvey wrote few letters. The next which appears to require insertion in this narrative refers to the approaching death of Miss M. C. Harvey, the daughter of his eldest and only surviving brother. Stripped as he had already become by his sister's death, this fresh loss sadly increased his sense of loneliness.

No allusion has hitherto been made to his having been (to use the words of reception) "grafted by baptism into the body of Christ's Church," which took place on Ash Wednesday (February 25th), 1846, in St. Mark's Church, Dublin, in the presence of a few of his friends. No letters having been found relative to this event, it has not as yet been alluded to in these pages, owing to the construction which has been kept in view. It seems proper, however, here to mention it, and to add that, through the ordinances and services of the Church of his adoption, he drew from "the wells of salvation" sustaining strength and

comfort during what he styles in a letter "this dreary period." Her lessons and collects had for a long season, and "in perils by land and sea," become his daily food. He was fortunate also at this time in having the companionship of his cousin, the late Dr. Fisher, then under-librarian in Trinity College, to whose memory a tribute has appeared from the pen of Dr. Todd, S.F., T.C.D., in "Notes and Queries," February 2, 1867. He did not cease to devote himself with his customary diligence to his botanical duties and employments; the productions of the vegetable kingdom still possessing unfailing interest, speaking as they did to him of the Divine hand that had formed them.

To Miss Harvey, New York.

Trinity College, March 18th, 1858.

Why you desire a letter from me is a puzzle; for, to myself they are generally "dull, stale, and unprofitable," and I seldom write latterly except on matters of business, or where duty imperatively calls on me. I have only returned home from having spent a week or more watching day by day the rapid progress of poor M——'s illness, which is now past all human aid. I am prepared any day to hear that she has entered into her eternal rest. Would that we were all as well prepared to meet death as she is! Her life has been a short one, and she was little known beyond her own circle; but no one who was much about her, or knew her, could help loving her, and she will be sadly missed. It was very pleasant to sit by her side and see the beautifully peaceful and bright expression of her countenance. She could not say much, for speaking brought on the cough; but every now and then came an intelligent smile, as much as to say, "I am happy and I love you all." Once she said to me, with one of those happy glances, "I know *all*," meaning that she knew how very hopeless her disease was; and then she expressed her willingness to go at any time that it was the Lord's will, feeling chiefly on her mother's account. She could not *speak* on this subject to her mother without agitation, and so she wrote her a note in pencil, telling her how she felt. Her mind has been thus happy throughout her whole illness, and I trust that He who has been with her all her life long will be with her while she is passing "the river"—I was going

to write, "with her *to the end*," but it struck me that that would not be a true expression; for the end here is but the *beginning* of hereafter, and dear M—— is now too near the borders of the happy land to see the barrier that lies between in the same light as it appears to us who remain. I begin to feel very *lonesome* in this world, so few of those I have loved best are remaining, and every year takes one or more of these, so that I often look forward with a sort of dread to a prolonged old age. But I trust such is not in store for me. Whether it be allowable or not, I cannot help saying to myself, "*We* are a short-lived family; the probabilities, therefore, are against my attaining to *old* age." One feels old, however, when one has outlived, as I have done, almost the whole of my immediate family. You know George Herbert's lines:—

"Oh that I once past changing were."

They are great favourites of mine, and if you can conquer the quaintness of the style, you will find many of his poems beautifully true to our inmost thoughts and longings.

To Miss H——.

Plassey, Limerick, July 25th, 1858.

I am sorry to find by your not being allowed to read that your eyes are no better. Have you no *holy* wells in America? If you were in Ireland you could go to a well and set them all to rights. A *new* holy well has just been established close to Summerville, where the monks have set up a "Redemptorist" house. It seems they sunk a pump for the use of the house, and finding the water good, let some of it run into a trough. One day a lame man came and left his crutches there, and walked away on his own proper legs. This got wind, and now hundreds of people come to the pump every Saturday, so as sometimes to block up the road, and carry off the holy water as a remedy for all diseases, but especially for sore eyes. They have put up a little chapel with an image of the Virgin, &c., and a nice stone trough for the water to run in, and a considerable revenue thus comes in to the house. Limerick is getting completely surrounded with monastic houses, and in another generation or so, if all goes on *well*, it may become

quite a holy city; so come and try whether it be not good for sore eyes. Your account of —— is interesting, and if the results be as good as you say, we will forgive the Puseyism. If by *Puseyism* be meant zeal and Church principles, I have no objection to them. Here we have two sorts of "*Pussey-cats*" (as I call them), a good and a bad sort. The latter are for going as near Rome as they can, by imitation, gesture, dress, church ornament, and so forth. These generally end by slipping off on some small pretence, but seldom carry a congregation with them. The sentimental lady religionists are very apt to go, and we can spare them. The former are really zealous in a good cause, like your friend George Herbert, and look to such men as him and Bishop Ken and those worthies of that day as their models. "Against such," saith St. Paul, "there is no law;" but they generally get well abused, and have to suffer for the sins of their Romanizing brethren and romancing sisters. Now I think I have said my say, and shall bid you good-night.

During the vacation of this year Dr. Harvey joined his friend Dr. Hooker in an excursion through the counties of Sussex, Devon, and Cornwall. Some of the objects which most engaged their attention on this tour are described as follows in a letter to one of his American nieces:—

Trinity College, Dublin, September 25th, 1858.

Arundel Castle in Sussex would, I am sure, have pleased you, not only because it is a very fine old castle—nobly situated on a height as a castle should be, and overlooking a broad and beautiful country—but because it is historically interesting from Norman times, and its possession gives the title of earl to whoever inherits it! This is one of the very few instances in England where nobility does not spring from "a creation" to a certain family and heirs, the title being here given by William the Conqueror to whoever should inherit this property. Thus it has passed from one family to another through female heirs, and at present belongs to the Duke of Norfolk, whose eldest son is styled Earl of Arundel. The old castle is partly a ruin, but a modern one has been built round its keep, and in it the duke very often resides. We only visited the ruined part,

which stands on a mound in the centre of the great quadrangle, and overtops the modern portion. A narrow staircase leads to the top of the walls, from which you overlook a very rich landscape. The keep is roofless, but a net is spread over the top, under which a number of large owls are kept. They build in the ivy and yew, and live on the bounty of the noble owner.

We visited both Salisbury and Exeter Cathedrals, but our day at Exeter was spent chiefly in Veitch's famous Nursery Garden, which is an immense establishment. We were much interested in his collection of plants, both open air and hothouse. One of the latter had in it about thirty kinds of Pitcher plants—more by far than any other garden in the world could show. Mr. Veitch employs collectors in various countries, and by this means he has introduced more new and fine plants into England than any other private person. We dined with him, and he was very kind to us.

Penzance was our head-quarters for nearly a week, from whence we diverged to sundry places, including the "Land's End," but it hardly repaid us for the trouble, the sea cliffs, of which we had heard so much, being greatly inferior in height and boldness to those in many parts of Ireland and Scotland.

You have probably read of St. Michael's Mount, a conical islet connected with the land by a causeway covered at high water, and on which is situated a very picturesque monastic building, now converted into a private dwelling. A family named St. Aubyn, to whom the Mount belongs, live much here in the summer, and certainly it is the snuggest eyrie I have ever seen. They showed us old carved bedsteads and chairs of oak, which they said were five or six hundred years old. On the wall of the central tower is St. Michael's chair, famous for the privilege it confers on man or wife who first sit in it: if husband, then he rules ever after; if wife, she is mistress and more.

Another excursion was to the Scilly Islands. What most interested us there was a curious garden, commenced about thirty years ago by the gentleman who leases the islands, and who has successfully grown a number of plants in the open air which in England are usually seen only in greenhouses. There are great hedges of geraniums, and a multitude of Australian, Cape of Good Hope, New Zealand, and Californian plants.

Some shrubs rarely seen in England here form thickets, and your magnolias (*grandiflora*) are forming good-sized trees and flowering freely, but this they also do in Cornwall.

What a row you made about the Atlantic Telegraph! We were much amused at your fervid excitement. Here every one was certainly glad, and it formed a topic of pleasant conversation, but no one thought of illuminations. Now that it is probable it may have to be laid afresh, it does not afflict the public mind, though it disappoints and, no doubt, troubles the shareholders. If another cable of greater calibre is laid, perhaps the Great Eastern may be employed. It seems a service for which she would be well fitted, if she were once ready for sea.

To Mrs. Gray.

Plassy, Jan. 3rd, 1859.

It is full time that I should reply to your welcome letter received early in December, and now January is growing apace, a new year opening, and the snowdrops and crocuses making busy preparation for their gala. We have as yet had neither frost nor snow to disturb them, and so they have it all their own way. The violets have not ceased blooming all the winter. I thank you in advance for the new volume of Holmes's Poems, which I have no doubt I shall enjoy. I read little modern poetry, because the fashionable poets are so very high-flown, smoky, and cloudy, that it is too much trouble to peer through at their meaning. . . . I must not conclude without a few words for the "Old Folk" here, who remember you with affection. They have borne their great affliction very patiently. I think you will find some (perhaps much) of the "Memorial"[1] interesting, showing a depth and earnestness of piety with great simplicity, truthfulness, and love. To those who knew her of course the effect is stronger, for it seems like hearing her own sweet voice again.

To Dr. Gray.

Trinity College, January 27.

I am working at the rate of three hours a day at the Japan Algæ, and have made good progress. I am nearly through the

[1] Memorial of his niece, M. C. H., which he edited.

Loo-choo bundles, and these are by far the largest. There are a good many new species, some *curious*, and *one* new genus—a very distinct and beautiful thing, *Halicoryne Wrightii*. I should be glad to figure it in our Dublin "Natural History Review" as it is a curious new type of my family "*Dasycladeæ*" in "Nereis Bor. Amer."

I am going to begin a new affair on the plan of Hooker's "Icones Plantarum." I call it "*Thesaurus Capensis*:" figures of Cape plants, whether new or old; anything in short that I please, to illustrate the Flora. Without professing to figure all the genera, I shall make it serve the purpose of illustrating those that are the least known and least obvious, and that have not been previously figured as garden plants. I shall also use it for rapidly figuring remarkable novelties that from time to time drop in. It remains to be seen whether it go beyond a volume. So far as *material* goes it might run on to twenty or thirty!

Tell Madame, with my love, that I am reading the "Autocrat" every evening at teatime, and I like it much. It is very clever and original, very racy and droll, and I might add very *wise*. Some of the poetry also I like much. "The Nautilus" is newly turned. His chapters on the commencement of old age I take to myself. I am now in my third year, commencing at forty-five, and begin to be treated with respect. Young men touch their hats to me and call me Sir. If I don't mistake, my old friend Dr. Mackay must be eighty-four or eighty-five, but he looks and I suppose feels as young as he has done any day these ten years. I set him at work which gave him occupation for several months at five hours a day: preparing an authentic set of plants of "Flora Hibernica" to be kept permanently in Trinity College, Dublin, as a separate collection for reference, as to what he had had to work on when writing his book. And now in my Cape Thesaurus I am going to reward him with a *Mackaya bella*. As yet we have had neither frost nor snow. Snowdrops and crocuses are peeping, hepaticas in bloom, and the winter aconite (*Eranthis*) my special pet, already a going.

To Miss R. Harvey, New York.

Trinity College, January 21st, 1859.

I am sorry for M.'s sore eyes. I wish I could send her a remedy. The only one I can think of at present is to suggest

a trip across the Atlantic. We have a saying here, when a long-promised visit is at length paid, "It is good for sore eyes to see you," and perhaps it might do her good to see the few Irish kindred that are now left. But I am not going to wander into sad reminiscences, which naturally come to me at this season; of this time twelvemonths, and again of this time two years. Each of the last two years took its prey, and that from the nearest and dearest; the best, and those who are most missed. Well, I have so far put on the old man, that I can sit and think of the few remaining years, when my own time will come round. You are too young for thoughts like these, and are full of making new acquaintances and friends, filling up the nooks in your heart with new treasures. All right. I am just now reading the "Autocrat of the Breakfast Table," sent me by Mrs. Gray. I dare say you have seen it. It has but just arrived in England, and has met a welcome. Holmes is popular on account of the *fresh, racy* spirit of his old book of poems, and the present volume I dare say will have a great run. It is sharp, hard, and sparkling, just as I should expect of the author. I met him in Boston and remember his litheness and briskness, and bright flashing eye. He *looks* every inch a poet. I read very little of this kind. My time is, as usual, engrossed with my botanical pursuits and professional duties; and as I generally continue to have more schemes afoot than I can well get through, my reading time is fragmentary. One advantage of full occupation is that it keeps the blood circulating and prevents time hanging heavily. The day is too short for the work, though I rarely stir out from morning till evening, except on Sunday.

You talk of your love of the sea, and contrast it with M.'s love of mountains. I love both; perhaps I am *fonder* of the sea, and admire the mountains more, that is when they are high and snow-capped, like Aconcagua, 23,000 feet high, that I used to watch at sunrise from my bedroom at Valparaiso. I enjoy *life* by the sea-side, and *exercise* among the mountains. The sea is *passive*, the mountains *active* with me. Both in this season excellent. If I were to choose one before the other it must be the sea, for I am fonder of passive than of active existence, and (Oh! Oh!) never so pleasant as when I am fast asleep! So there's my opinion on your controversy.

You seem to have been very happy at the sea-side. You talk of managing a boat, but here am I, who have been all round the world and back again, who would not find myself much at home if put afloat, and told to guide myself into harbour again.

To Mrs. Gray.

Trinity College, Dublin February 9th.

I am sorry to hear from Asa that you are getting through the winter so uncomfortably, but I hope with the crocus and narcissus buds you will begin to pop up again. You know Herbert's old poem of the flowers underground—

> Where they together,
> All the hard weather,
> Dead to the world keep house unknown.

"Gone to visit their mother root," as he quaintly says. Well, I trust as the days lengthen that you will throw off your troublesome ailment and get abroad again.

It is just ten years ("come fall") since I made my voyage to America, and what a many things have happened since! I have seen more changes of one kind or another in these ten years than in the preceding eight-and-thirty. This reminds me to say that I have finished "The Autocrat," and enjoyed it more and more as I went along. It is thoroughly fresh and playfully keen, just what we should look for from the author; and the tone throughout is so good and healthful, that it is very pleasant reading towards the end. You may remember an account he gives of a "Hangman's Pillar" seen somewhere in England, and he offers a copy of the book to the first person who will tell him *where* he has seen it. This is like Nebuchadnezzar, who required to be told his dream as well as the reading thereof. Howbeit I asked Dr. F—— (my factotum), and he at once replied that it had been discussed a couple of years ago in "Notes and Queries." Yesterday he brought me the volume, namely, second series, Vol. I. (January to June, 1856), where Mr. Holmes will find under "Hangman's Stories" in the index, several references. It seems the legend exists in a great many parts of England where stones are shown. I fear this does not increase the *authenticity* of the story. It is like the multiplication of *relics*, every new one diminishing the value of the evidence for the former. I have

looked over the references and fixed on that at page 502 as the one Mr. Holmes encountered. It is said to be between Sheffield and Barnsley at a picturesque turn of the road, and it is further said that the "Jehu of the now extinct Barnsley mail always told the story to any inquiring passenger who happened to be one of the five at top; as quaint a four-in-hand as you shall see." The only thing *failing* is the "marble pillar." That must be in the poetical imagination of the traveller. In all the locality there is nothing but an upright stone to be seen. So far for the "Autocrat." Have I any chance of a presentation copy? I fear not, seeing the matter is so patent. Well, if I get an autograph copy of the "One Hoss Chay" I shall be satisfied.[1]

The Wrightian Algæ took me just a month at three hours a day. You may think it a long time, but when nine-tenths of them had to be microscoped and dissected, you will allow that it was no little trouble. *Greyia* is published with this apology. We have a Lord Grey, and a Lord Gray, and a Lord de Grey, all different peerages. Botanists have *Laurencia* and *Lawrencia*, and more recently *Barclaya* and *Barklya*, not to speak of *Escholtzia* and *Ellscholzia*. But two wrongs do not make a right. No. But then I am no worse than my neighbours. The name is Sir William Hooker's choice, not mine. I was for calling it *Mackaya* (the genus so named being a bad one), but I have now a new *Mackaya*, a very lovely thing, from Port Natal. I shall now go write up Cape Flora for printer, instead of spinning my brains to fill paper for you.

To Mrs. F——.

Trinity College, Dublin, March 31st, 1859.

Last evening the Doctor, T. H. T. and I went to a missionary *tea* to hear Mr. Calvert, the Fijian missionary, give an account of his former people. He was an old friend and fellow-traveller of mine, and I was glad to introduce him to the others, who were much pleased with his downright, unvarnished and plain, yet very striking story. He is to dine with me some day.

This morning when I came to college I found the Doctor waiting for me in high excitement and full of matter. He had

[1] Mr. Holmes presented a copy of his book to Dr. F. in fulfilment of his promise.

just been breakfasting with Poerio, and a cluster of his Italian compatriots who came last night from Cork, and were taken home by R. D. W. Thomas went up to Poerio, and said, "Ben'venuto a Irlanda," to which the other responded very warmly. The Doctor could say no more, but, "Je ne puis parler un mot d'Italien," &c. So they got on as well as best they could in broken French, and had a good deal of talk. Poerio of course told them stories of his imprisonment of ten years in a dungeon, chained to felons and murderers, without books or writing materials, or "the human face divine," save in its most degraded form. How he lived through it all amazes himself, but he is now luxuriating in free air. Some one in Cork gave him a Dante, which was a great joy. They left to-day for London. No one in Dublin, save their hosts, were aware of their coming. I suppose the poor things wished to avoid the publicity and reception that greeted the first detachments.

To ——.

Trinity College, Dublin, April 7th, 1859.

The path before —— seems utterly barren and thorny, but possibly it may also prove the path to rest and peace. If the desert can "rejoice and blossom," so also the blankest human heart may at length, by suffering, be brought to bear its flowers and fruits. I just now think of a case that I recently heard of. A reprobate belonging to one of the best families in B——, discarded by his friends, was sent as a last hope to the Fiji Islands, to trade with the savages. He there fell in with a native chief who had learned Christianity, and who was kind to him. They traded together for some time, and when the American was returning home the chief said, "We are now about to part; let us pray together." "I cannot," said the other. "I never prayed." "Then," said the savage, "I will pray for you;" which he did with so much fervour that the American was moved, and led to reflect as he had never done before. During his homeward voyage his heart became changed, and on his arrival at B—— he entered as a candidate for holy orders in the American Episcopal Church, was ordained, and is now gone as a missionary to the coast of Africa. Thus there is hope for all, and some natures require trials,

privations, and sufferings to bring out good; disciplined and schooled perhaps severely, yet it may be to everlasting profit.

The August of 1859 was spent in company with some relatives at Ballybunion, a small watering-place in the County Kerry at the mouth of the Shannon. "Our days," he writes to Mrs. Gray, "pass quietly and without much variety—little to be done in the Natural History line, and, as I know all the stupid Irish plants *ad nauseam*, they don't amuse me; but we have pleasant walks over the cliffs and by the headlands, and when not walking I copy MS. of Flora Capensis for the printer. Has Tennyson's new book, 'Idylls of the King,' found its way across the Atlantic? I have actually read it from cover to cover, which is more than I have done with any book of poems for many years. I like it much, particularly the first and third stories. It is pleasant reading for a hot day stretched on the grass under a tree. The old romantic spirit seems faithfully rendered, and the language is simple and musical, without any of the fantastic excrescences that deform so many of Tennyson's poems and those of his imitators."

From Ballybunion Dr. Harvey passed over to England, and in a letter to Miss Harvey, New York, he gives an interesting account of a visit to Cambridge, during which he had the pleasure of being present at an agricultural fête given by Professor Henslow to his parishioners. "It is," he writes, "very pleasant to witness the greatly improved condition of the people since Mr. Henslow took them in hand. In old times the parish was noted for thieves and vagabonds, and the church was empty; the only frequented places of worship being a few dissenting meeting-houses. The people are now steady and comfortable, and take the greatest interest in their gardens, and in agricultural improvements, and both church and schools are well filled. Unfortunately the weather broke just before the fête-day, and we had a cold dreary *downpour* most of the time, which greatly spoiled the picturesque effect, and kept away strangers, but it did not damp the spirits of the villagers, of whom about four hundred came to the rectory. The show took place in the pretty sloping lawn extending from the house to the church, which with its old Norman tower is a handsome object, seen through a vista among the trees. At one side of the lawn was a

marquee, fitted up as a temporary museum, displaying a number of curious and instructive objects, on which from time to time the professor gave what he calls 'lecturets,' or familiar explanations. The prizes were small, the highest being only three-and-sixpence, and it was pleasant to see that mere nominal sums were sufficient to incite the competitors; who, no doubt, valued the *éclat* of having their carrots, turnips, or onions ticketed 'First prize,' 'Extra prize,' &c., much more than the money which the prize represented. Such shows as these are now gradually extending in England, and in many ways they will be extremely useful to the poorer population, and also to the wealthy class, by bringing them more in contact with the hopes of the poor and their every-day life. It is customary for two or more of such societies, in different parts of the kingdom, to compete *together* for what is called a sweepstake prize, and this year, in such a competition with two other societies, out of fifteen prizes Mr. Henslow's people won eleven, which announcement produced great cheering. At the close of the day the booth was cleared of its vegetables, and about three hundred sat down to a plentiful tea, where bread and butter and plum-cake went round till all were satisfied. The tea was brought out in pails and huge jugs, after which the chief prizemen drank the health of the society in Cambridge College ale, then the whole company sang 'God save the Queen,' and so broke up. I fear I have made a very tame affair of it, but put this down to the heavy rain, which damped the matter. The result at all events was good and pleasant, as seen in the happy faces of four hundred poor people. Professor Henslow, I dare say, passes among his brethren for no better than he should be, because he wears a *black* necktie and a *layman's low fronted* waistcoat, but the work he is doing is building up the Church on a better basis than that of rubric and æsthetics. Nevertheless, I rather like the clerical costume to be kept up when it does not interfere with things of more moment.

"You will see by the papers that the last Franklin expedition has returned *successful*, bringing satisfactory evidence of the fate of the vessel. It is very pleasant to think that the horrible tale of their eating one another through famine was untrue, and that poor Franklin died quietly in his bed before the ships were deserted or their troubles had begun. I have seen the medical

officer of the expedition and heard many particulars from him, but there is little more to be told than what has been made public. I saw a *tracing* in fac-simile of the document signed by FitzJames and Crozier. The relics are to remain unopened till Lady Franklin, who is in the south of France for her health, returns to England. The officers are greatly devoted to her; her noble untiring energy and the sacrifice of her entire remaining fortune in the cause have quite won their hearts. It is now proved that the whole party must have been dead before the first searching ship sailed from England. M'Clintock, the successful commander, is a Dublin man, so we are going to get up a demonstration for him."

To Mrs. Alfred Gatty.

Trinity College, Dublin, November 23rd, 1859.

My dear Mrs. Gatty,

I send you by post a volume of Greville's Crypt. Flora, wherein under plate 231 you will find a long story about the *Protococcus* (red snow plant), telling you how it was first found and what was thought of it. As I have not recently read it, I can't tell how many of your queries it may answer, and so I proceed to answer them as best I can, under corrections of the book. First, each individual *Protococcus* has a very transitory life, reckoned by hours, or at most by days, but not by weeks. But the community is perennial, to be found at all seasons, more or less. The plant grows indifferently at any place where there is water and a place to rest on. I don't think it is troubled for soil. I have found it on a windowstock, and in the gutter of a house. Probably there are thousands or millions of *Prot. nivalis* about your vicarage, and you don't know it! It is true that when it grows in the domestic way the Germans call it *P. pluvialis*, but to my mind (and that of many other botanists) there is about as much "specific" difference between the matter of snow and the matter of rain as between the *P. nivalis* and *P. pluvialis*.

When the plant grows in its *pluvialis* state it is difficult to find, being inconspicuous. When seen on snow (I have seen thousands of acres of it on Mont Blanc and Monte Rosa) it gives the surface of the snow a faint tinge like that of French white note-paper, easily overlooked by a careless eye, and best seen by stooping down and looking obliquely along the surface

of the snow. The dab of carmine in Greville's book is a painter's flourish. So also (I suspect) the brilliant picture in Ross's Arctic Voyage. Where I have seen it in Switzerland, it was always very faint, but if you stooped down, scraped the surface with your hand, and gathered a thin superficial stratum, this was generally, when pressed together, a deeper colour.

I hope all this will suit your Parable, and shall be very glad to read it when it comes, and to find this more minute seed than "mustard seed" grown up into a flourishing tree, &c.

You ask, can chemistry produce vegetable life? I do not think so. It can foster production, and incite growth, but (I hold) there must be a germ to begin with, at least so far as I know. The nearest approach that chemistry has made to simulate organic substances is the artificial perfumes and spices formed out of fousel oil, but the oil was there to begin with. The day is yet future when you can send to the chemist your rough carbon, nitrogen, oxygen, and hydrogen, and tell him to send you back a pound of beef-steak. I believe he would find it as hard to make a *Nostoc* out of the elements. . . .

I mean to send you two pamphlets on the *Revivals*. They have not come in my way, so I have no strong views respecting them. Good and bad, in origin and result, seems the sum of the matter.

Trinity College, Dublin, December 3.

All's well that ends well. I just write a line to say that you may take as long a shot as you please at the *Protococcus*. Ross, you know, discovered it, when sailing along the Arctic coasts: he saw the cliffs of snow for miles painted red, landed to examine, and found the snow for several feet in depth full of *Protococcus*.

I have a little red atom from the Red Sea, said to colour the waters when abundant. But I sailed from Suez to Aden, through the bluest water—no trace of red. Thus men travel from Dan to Beersheba and see nothing. But I have seen the sea (near Penang) looking like thick green pea-soup, also from a microscopic Alga.

Yours truly,
W. H. H.

To the Same.

Trinity College, Dublin, January 10th, 1860.

Here I am sitting at home (by the fire; my chair put close in on the hearthrug, and the table pulled out of its centrical place accordingly) while the rest of the good folk are gone to chapel. I don't go to-day, not that I may take the opportunity of writing to you, but because I am going by-and-by to St. Stephen's to hear a man preach in a beard as big as Aaron's, or bigger. You may well say, "What went you out for to see? A man in a beard?" Not quite, for they may daily be seen in the streets, but the preacher is (I hope) likely to be a useful and perhaps famous man one of these days. He is going to be a missionary under Archdeacon Mackenzie in South Central Africa, and is to preach to-day for the mission, and as I am one of the committee I want to hear him. You have heard no doubt of the Oxford and Cambridge Mission to Central Africa. Well, it is now to be called "Oxford, Cambridge, and Dublin (*tria juncta in unum*) Mission." We have had a meeting in our hall, and are fairly started; and I hope "we three" (Universities) won't "logger-heads be;" but it is a great and a glorious undertaking. Mackenzie (to be the first bishop *in partibus* from English Church) was here at our meeting, and gave a most spirit-stirring address, practical and business-like, and at the same time warm, and poured forth like a gushing stream from an abundant fountain. He is just the man to lead a band (not of "4000 who were murderers") into the wilderness, but, like an Australian squatter, to push forward the bounds of civilization into the untilled soil and establish his flocks securely and prosperously. As he explained to us, simply, his proposed arrangements, I was struck with the real poetry of one picture that he unwittingly brought to my eye. He was explaining how they should first settle the mission, before their houses were built and their people gathered round them. As for themselves, why, the native huts would shelter them, that was nothing. But how was their church to be? He told us then what makeshifts he had to resort to in his colonial missionary work, and that they now purposed to avoid these, and to start from the very beginning with a thing set apart, consecrated to worship. So

they take with them from England a *church tent*, a large white tent, decently and orderly fitted up and large enough to hold a good congregation, and this would be set up at once in the midst of their "*kraal*," and used for their morning and evening devotions and for no other purpose. Well, as he spoke, so simply telling us the details, and perhaps unconscious of the picture he was drawing, the "*Tabernacle of Witness*" set up in the wilderness seemed to rise before me, and to suggest so many thoughts that my eyes foolishly filled as the mind ran on from thought to thought, from the small present to the possibly great future, and back to the dreary past. It seemed as if one of those delicious soft showers that waken up vegetation in spring were now falling from heaven on that "barren and dry land, where no water is," and that this was like the beginning of the fulfilment of the promise, that the wilderness should rejoice and blossom as the rose, &c. &c. You will see at once the crowd of images that occur, and I do hope and trust this new mission may go forth with the blessing of God, "conquering and to conquer."

To ——.

Trinity College, Dublin, February 21st, 1860.

"Truth is a *fixed* star." G. G—— himself, of whom I often think, is now, I trust, a "fixed star," to shine for ever and ever. Do you ever in any degree realise what I suppose to be the "communion of saints?"—namely, when you are doing anything, the thought of one that is gone comes across your mind, with a feeling of sympathy, as if the disembodied spirit were holding present communion with yours, putting thoughts into your mind, and helping you along over your little difficulties. Such thoughts often come to me, and especially when my mind is strongly engaged on any subject.

March 16th.

I have just got yours telling of our friend's removal, but before this reaches you you will have received tidings of another bereavement which will touch you more closely. I had not expected it *quite so soon*, but it is only what we must all have looked to hear sooner or later; and now that it is over, all we can say is that he is in hands that are equally stretched

over ourselves, and that He who has cut short the thread of life is infinite in mercy, and his compassions fail not. All is mystery, even when the best of us are called to the account; and where we know so little we must rest in faith and submission. "His way is in the sea, and his paths in the great waters, and *his footsteps are not known.*" These words occurred to me in thinking over this news, and I know not how to write, but to bid you trust in Him who knows the secrets of all hearts, and can best decide on the proper length of days allotted to every separate life. It is impossible to offer comfort, but one may try to lead the thoughts trustfully to the feet of the Cross, to Him who underwent death for every sinner.

I trust you will at length be able to acknowledge that all that has occurred has been wisely ordered, and that we can neither rebel nor murmur at the doings of Providence. . . .

If a cry would bring back the dead, there would not be wanting "an exceeding bitter cry," like that of Esau, but we know it won't avail, and therefore it is suppressed. We know our own time draws on, and so we rest more *contented*, as the world thinks, but often (as we know ourselves) only *silenced*, "shut up," driven back into ourselves.

To Dr. Gray.

Trinity College, May 20th, 1860.

I am still in the midst of my huge purchase, which it will take a year or more to put into Herbarium, and, besides, I am preparing Volume II. Flora Capensis to go to printer. The Cuban Ferns must *wait over* till *pressing* things be stowed away.

And now for what you say of the famous theory. I saw in the first few lines, by your using the word "sweeping," what the *undercurrent* of your thoughts was, and I felt glad that there was *one*, at least, of my botanical friends whose feet were not quite whipt from under him. I am fully disposed to admit natural selection as a "vera causa" of much change, but not as the "vera causa" of species. I fully admit the impossibility of defining the limits of species, genera, or orders; but this does not shake my belief in the existence of *limits*—unseen by our eyes, undefinable by our philosophy. But how many "natural

species" were *created*, and what they were like, I trow not. That they were vastly fewer than the forms we now call species, I think probable, but also that they were vastly more numerous than Darwin would have us believe.

The imperfection of geological record may be argued both ways, either as Darwin does, or we may say—if all things that ever lived had been all fossilized and could all be found, then we should trace back existing species and genera *through all times* to the beginning, and the supposed *succession of new types* revealed by geology would disappear! Monstrously absurd, perhaps, but not worse than Darwin's supposition; for if we trace *Chiton*, *Lingula*, *Anodon*, and many other *existing* genera *down to Silurian*, and find the living species *scarcely divaricated* from the oldest fossil, and if we consider that a very few years ago scarcely a fossil *Chiton* was known, yet now there are *forty*—going down to *Silurian* may we not argue that, if all *Siluria* were laid bare, a vast number more of similarly *undivaricated* genera and species would turn up? To what "lower deep" below the lowest deep must we dive to find the four or five originals from which Darwin assumes that everything divaricated, if natural selection from the *Silurian* period to the present day has made nothing out of a *Chiton* but a *Chiton?* And so of other genera? The whole question is removed out of court. Evidence ceases at *Siluria*, where *Chiton*, *Lingula*, and *Anodon* differed as widely from each other as they do in the year now shining.

To Mrs. Alfred Gatty.

Trinity College, Dublin, *Thursday*, May, 1860.

As your last letter is dated *only* "*Tuesday*," and my present one is Thursday, how can it be proved in after ages that I am not answering you as soon as I got your letter? In truth, I know not whether it be a week or a fortnight that I am behindhand. We hope not the latter. I am busy as usual, and as unusual, with a double set of daily lectures in hand, and a triplet impending next week, besides writing up "Flora Capensis" for a hungry printer. I want to get Cape *Leguminosæ* off hand before vacation, and to enable me to close I must work every available hour.

Now for your queries. Is it that you don't understand in *Plocamium* "alternately ternate or quaternate?" [Here followed two sketches.] You may compare these to Ogham runes if you choose. I congratulate you on being through with Dr. Wolff. I shall see him by-and-by, but shall defer buying till I get him half-price, which is sure to be the case with a biographical work in six months! It just occurs to me to say, that at present my lectures are "*alternately binate*," and "*alternately ternate*," week about. Do you understand?

1st week, 2 per day.	2nd week, 3 per day.
3rd week, 2 per day.	4th week, 3 per day.

Yours truly.

To the Same.

Upper Cahir Abbey, July 18th.

The great fact (which can never be "ridiculous" or unworthy of revelation) of the Cosmogony of Moses is, that "God made man in His own image;" and this I firmly believe, let —— prove what he can, or believe what he may. But Moses does not say *how* "The earth brought forth grass," &c., by what *process;* or anything more definite than the fact of an "ordained becoming of living things," *i.e., a creation.* I cannot believe that SCIENTIFIC *facts* are revealed in Scripture, and I think that much mischief is done by striving to find them there.

To ——.

Ecclesfield, August 29th, 1860.

Here we are, arrived last night, and I am writing in my bedroom before breakfast; so I have not as yet much to tell, except that "Aunt Judy" is away; but that you knew before. Dr. F—— says Mrs. G—— is exactly what he expected to see—so I must say so too. She is slight, tallish, and intellectual looking, and withal quiet; at least, as yet, nothing very mercurial has broken out. But there is evidently the mercury below the surface, and I can quite fancy her blazing up the way poor S—— used to do, when strongly excited.

We arrived after their tea and had a new tea for ourselves. Dr. Wolff is here and plied Dr. F—— well with talk, but I

could not much enter into it. Dr. Wolff has not yet come fully out. They are busy writing the new volume of his life, and this will end it. Bright sunshine this morning, and the view from my windows very pretty—a broad, undulated, wooded country, with hedgerows, &c., &c. This is a *parish,* not a town; a large old house in a glebe land. The church a short stone's cast on a hill: square tower. The G——'s have books in *all* their rooms—lots of them. Mrs. G——'s father was Chaplain to Nelson, and they have letters and relics. One relic is a double easy-chair, makeable into a bed, in which he always slept on board the Victory. Dr. F—— and I sat in it.

Royal Gardens, Kew, September 5th, 1860.

We stayed at Ecclesfield till Saturday. I am not sure that I had quite got over my shyness when I left, and Mrs. G—— said in parting she hoped next time we should get better acquainted. She found out I was shy, so I confessed thereto.

To Mrs. Alfred Gatty.

Kew, September 8, 1860.

Don't think I do not value the Tennyson (In Memoriam), and am not grateful for your gift of it, by the very awkward way in which I *groaned* over receiving it, yesterday and last night. If you must needs know the *vera causa* of my yesterday's grumbling, it was simply (don't be vexed with me) I thought you might have *told* me *to buy it,* as I should have done first opportunity. . . . The first page I chanced to open was cxiii., "Who loves not knowledge," and I don't want *any* explanation of it, I think. Perhaps I do, though? Nevertheless I gather a meaning, and an excellent one, from every line, and it bears on our controversy, too. I see that I shall like the book well, at times and half times. You tell me not to read it like "Lara" and the "Corsair." I reply, I read them thirty years ago, and never since.

To the Same.

September 15th, 1860.

This morning's post brought me (sent to try whether I would subscribe) number six of a monthly periodical called "The Future." You may judge what it is like by the heading

of the first article, by the Editor: "Studies on the Plan of the Universe." No. IV.—*The Earth a Living Organism.* What think you of that? *Categorical?* The second article is like unto it, namely, "On the *Independent* Existence of Matter and its Laws." Then follow correspondents, who write, first, "On the Inherent Superiority of the Male Sex," being apparently a reply to a previous editorial article, which seems to have exalted the female to the highest place. Next follows "A Pyropelagian, on Planetary Growth." (A Pyropelagian is one who lives in a sea of fire. *Crabbed.*) I need hardly say most of the writers are in the "seventh heaven" (in their own eyes), but in yours would be in the "nethermost hell."

"Beyond the lowest deep, a lower deep."

I shall not subscribe, though the price is only four shillings per year. The principles, so far as I comprehend them, appear to be those called *Positivism*, or French pseudo-philosophy and vain deceit.

To Dr. Asa Gray.

November 3, 1860.

I have read your Darwin papers with great pleasure and profit. Almost thou persuadest me to be a *Grayite.* I have no objection *per se* to a doctrine of derivative descent. Why should I? *One* mode of creation is as feasible to the Almighty as another, and, as *put by you*, is very consonant to sound doctrine. I have had a short friendly correspondence with Darwin on the subject, but without much result one way or the other. I confess, however, since I have read the *whole book*, to a somewhat changed view. His latter chapters are those which have most impressed me, and particularly that on geographical distribution, and the geological-geographical distribution successively through ages. Certainly there are many *broad facts* which can be read by a supposition of descent with variation. *How broad* those facts are, and how broad the limits of descent with variation may be, are questions which I do not think his theory affords answer to. It opens vistas vast, and so it evidently points whence, through time, light may come by which to see the objects in those vistas, but to my mind it does no more. When he passes this true deductive inference, and proceeds to build further

inductions on it, and to force all things to converge on one point, then I draw back, thinking with Hamlet, that there may be things *in the scheme of creation* which are not explained, although (they may be "dreamt of") in our philosophy. A good deal of Darwin reads to me like an ingenious dream.

Plassey, Saturday night,
January, 1861.

My dear Mrs. Gatty,

I hope your Red Snow aquarium may answer, but I don't think it can ever be very ornamental; even if it flourishes wondrously, it will look like a patch of blood on a stone. "Ah!" but say you poetically, "*a sang-real*," and so you will be pleased. 'Tis thus we make our pleasure or pain for ourselves, according to the way we look at anything, even at a *Protococcus*.

Tell Wolff that if Nachash was a *rattlesnake*, then Eden was in America (probably where Master Chuzzlewit found it), and the "fever and ague are the flaming sword that keeps the way of the tree of life." There are *no* rattlesnakes except in America. "Ah!" but says Wolff, "there *were* once." "May be so," says I; "pray read my Tenth Conversation of Charles and Josiah." *You* will say I am a sad heretic. I assure you that Tenth Conversation was written word for word as it is now printed (it came to *me* to-day, so I suppose it has gone to Dr. Gatty) *at sea*, on board the John Wesley Mission yacht, sailing on the broad Pacific between the Fiji Islands and Rotumah. The *Natural History* part of the conversation was suggested to me by what I heard talked among the missionaries on board, who all seemed to believe in some such *hypothetical* state of the early world, such as I have put into Josiah's mouth. Some of it will *hit* your notions of a *decayed* world, "cursed for man's sin," and you will be down upon me in the ——. Don't mind; *slash* away; I never see that paper, and so it will not hurt me. Besides, I know your weakness (strength?) on that point.

I am *not at all surprised* to hear that the literal Hebrew of the 1st Genesis leaves Geology and Astronomy *perfectly open* questions. I should have been much surprised if it were otherwise. I never thought of looking for Natural History in the

Bible (so I say in Tenth Conversation, written in 1855). I regard those chapters as I should a magnificent overture to a grand opera. They open up the mind to great conceptions of the glory and power of the Creator, but I never (since long ago, baby days) looked on them as a literal history of what took place. Creation is one of those deep things of God too far sunk into the fathomless sea to be seen by man, or understood or made plain by revelation to his language or senses. Now and then we catch a flash of light from some half-revealed truth out of the depths, and then 'tis gone again. (I think now of those large luminous creatures that you see in the tropical sea, flashing under the ship many fathoms below you, "fair as the moon," and quite as *apparently* large.) But to speak of the days of creation and what occurred on each day (as if we heard the ticking of the dial-plate of time, and could watch the hands slowly moving round), I think no more *rational* than it would be to try and discover *to what music* it was that the "morning stars sang together." Let us by all means have the *literal interpretation* of the text. Let us rejoice in any light it throws on subjects that no language can express, and no brain of man conceive; but there let us cease, and turn to Haydn's music. So think I, and you will put me down as a heretic dreamer, and hand me over to the —— and ——, *i.e.*, to the *ingle-nook*. You know who sits there? "Riving sticks to roast the Duke," as Burns has it. "My dear," says Wolff, "Dr. Harvey *eats dust* (a nasty fellow) like the rattlesnake." Dr. H. replies, "True, Master W., and you shake your rattle (like a child)."

Now for Dr. Gatty. I have his letters about the lecture, and *of course* I could not go before *October;* I should hardly like coming close after —— (a *popgun* after an Armstrong battery). I am a very rumbly-tumbly speaker, without a particle of eloquence. What little *fancy* I have flows only from my *pen*.

CHAPTER XVII.

HOME LIFE AND CORRESPONDENCE.

Although surrounded by friends, and occupied more closely than ever by his College duties, Dr. Harvey's life had been rendered very lonely by the blanks left in his family circle during the past few years. But the spring of 1861 brought an important change in his circumstances. On the 2nd of April he was married, in Limerick, to Miss Phelps, a lady whom he had long known. His choice was most fortunate, and his remaining years were as happy as devoted affection could make them. But almost immediately after his marriage his health gave way. While lecturing at Glasnevin, the first symptoms of hæmorrhage from the lungs appeared, and were succeeded by a severe attack, from the effects of which he never entirely recovered. His physicians expected that a sojourn for a time at his beloved Miltown Malbay might suffice to restore him to health. He derived temporary benefit, but the following spring brought renewed delicacy, and thus he continued to fluctuate for the short allotted period of his days, the insidious disease never altogether losing its grasp, though hope again and again revived.

The Social Science Meeting was held in Dublin during the August of this year (1861). Dr. and Mrs. Harvey had looked forward with pleasant anticipation to seeing Dr. and Mrs. Alfred Gatty at their home during the session, but Dr. Harvey's illness sadly overruled this pleasure. It was arranged, however, that these English friends should include Miltown in their tour to the west of Ireland, and thus secure the mutual pleasure. An account of the visit will be found in Mrs. Gatty's sketches of this brief trip to Ireland, entitled "Old Folks from Home."

4 Winton Road, Dublin, July 5th, 1861.

My dear Mrs. Gatty,

Having written to you yesterday I am not going to write a *letter* to-day, but merely send a scrap to say that I got the "Monthly Packet" last evening after dusk, and this morning I read the "Bit of Green." Very pleasant it was and very touching too. I fairly trembled all over, my thoughts running so readily in the channel that "Aunt Judy" had scooped out for them. It really is a very well-conceived and executed little tale, and a good promise for those that are to come, showing both depth and feeling, and power of picturing scenes—the boy coming to his temper in the open air and all. She calls it the "*fresh*" air, an epithet that I thought hardly *quite* descriptive of the air of back streets and slums like Primrose Place (a capital name), though fresh in one sense it might be, meaning "cool." Poor Ben, too, with his armful of flowers and new hay, very, very good. It is very pretty and very clever, but don't tell her so. You may however so far butter her up, as to say that her Irish friends say "she's her mother's daughter," or as Goldsmith would phrase it, "What was good was spontaneous, her faults were her own." So now farewell. I did not mean to write any letter to-day, having writ four yesterday and found it quite enough for one sitting. I feel a little stronger, but must husband my strength so as to get to the country. The poor "Phyc. Australica" is stopped for the present, and I don't know but what it may end with vol. iv., instead of vol. v., as at first intended. My sight is not as good as formerly, and I have to use a glass when drawing on the stone, though not at other times. Poor old gentleman! This is a figure of my left foot just now!!! What do you think? Chacun à son *goût!*

Yours prosily,
W. H. H.

Of the time spent at Miltown he writes as follows to Miss Harvey, New York:—

Miltown Malbay, September 5th, 1861.

I am very much better than I was before my illness. We have been here for a month and mean to stay September also, which is generally the pleasantest season on our western coast. Our amusements would be thought monotonous by you, but

they suit our *time of life.* On fine days we saunter along the coast, and when it rains we have either books or writing. This is a queer wild place, without a tree bigger than a bush to be seen for miles, so that all the beauty and enjoyment of the place lies about the shore itself. There the aspect varies so much from day to day that we never tire of it. At the spring tides we have the excitement of looking for a beautiful blue shell called *(Ianthina)*, which floats on the surface no doubt from thousands of miles distant, coming to us with the waters of the Gulf Stream. Sometimes tropical floating animals come with it, such as the "Portuguese man-of-war;" and yesterday I found a crozier nautilus precisely like those I picked up on the shores of Key West. No doubt it came floating all the way from the West Indies. It is interesting to find so delicate a shell carried safely so far and by such a rough nurse as the sea. These I give you as a sample of the *important incidents* that amuse us in our *far niente* life, and all this while the whole world is setting itself by the ears.

The question seems to be which side, North or South, will hold out the longest, *united* and *enthusiastic.* I doubt not the infinitely greater resources in men and money which the North possesses, nor the patriotism of the better portion of the northern people, but I do doubt the honesty and patriotism of many of your leading politicians and the *steadiness* of the popular will, under a high taxation. The policy of the South will no doubt be defensive. If you will allow me to use a simile, I would compare North and South to man and wife. The lady's crinoline has caught fire. She is all in a blaze, and will soon be ashes. Her northern husband, in trying to save her from destruction, gets *awfully burned* and does not, I fear, accomplish his affectionate wish, but that is—the future.

On his return from Miltown, Dr. Harvey was able to resume his College duties, as well as to continue his "Flora Capensis," a work on which he had been for several years zealously employed. He also, at the request of some of his friends, revised for publication the MS. of "Charles and Josiah," the rough draft of which had been written while on his Australian voyages. From this time, owing to various causes, his private correspondence in a great degree fell off, and therefore considerable intervals occur

between the following letters, but they are sufficient to give to the reader a graphic and touching picture of his declining years, to which the editor feels that she can add but little by any words of her own.

May 19th, 1862.

My dear Mrs. Gatty,

What a long time since we saw the scratch of your pen! It feels like the first shower on the *Karroo* after a long drought which brings out the flowers that had been locked up in the clay for so many months.

You hope I am not lecturing, do you? Happy to tell you that I am lecturing—that I gave thirteen last week—hope to give eight this week—thirteen the week following, and so on till the middle of June, when the weekly supply will fall to three. End of June, "a silver spoon!"—that is to say, "otium cum dig." Beginning of July, "off we fly;" and first to Sheffield if you don't object. Thence to London, and so forth. I should like much to *'scort* you through Kew, and perhaps we may travel to town together if you are then going up. Ask all your questions when we go. If I cannot answer them, I shall hide my ignorance by yawning, and then you will be too polite to press me further, and will say, "Poor fellow, how wearied he is!"

To Miss Harvey.

Dublin, October 18, 1862.

Your welcome letter of September only reached me this morning, and now after tea, by our own fireside, I set about answering it. Why have I not written? Simply procrastination from day to day, and from week to week, till I had stifled my conscience thus: Wait till I go to London, and then I shall have lots to tell. We only returned a week ago, having left home early in July, so we have just been three months on our tour, six weeks of which we had lodgings at Kew. We afterwards went to the north of England to pay a visit to our friends at Ecclesfield.

You ask me to tell you of the Exhibition. All Exhibitions have a similar character as a whole, but the excitement this year was wholly unlike the "World's Fair" in 1851: then there was the charm of novelty, and the active superintendence

of Prince Albert, and every one was in the best possible good humour with every one and everything. All was sunshine of the brightest and serenest, and so every one enjoyed himself to the utmost. None of this halo rested on 1862—the poor Prince was in his early grave, the Queen secluded herself, only visiting the palace by stealth, in the strictest privacy, so that few knew she was there at all. So, though the *contents* of the show of 1862 are allowed to be far superior to those of 1851, the general effect was less beautiful. So every one says. The Jews who saw the first Temple, wept at the dedication of the second. Those who did not remember the first Exhibition, alone could do justice to this last. . . . The picture galleries were to me and to many others the most enjoyable part of the show. The English school, ancient and modern, was very fully and well represented. To me it is with painting as with music. I like the tender more than the grand or thrilling pieces. I know it is from defective taste, but no help for that. Truth is truth. We greatly enjoyed our visit to Kew, though it had its drawbacks in this—that I could not shut my eyes to the inroads that time has made in the health of my dear old friend Sir William Hooker. He was almost confined to the sofa the whole time, and though cheerful and patient beyond most, yet it was so different from his old buoyant activity that it felt sad. He has passed his seventy-eighth birthday! Still his mind is bright and vigorous, and sight and memory remarkably good, and he is as anxious as ever to promote his favourite science. Nor is there yet any shake in his clear handwriting, and his pen runs as fast as ever. It was two years since I had been at Kew, so I saw the greater change.

I have read reviews of Trollope's book that you write of. It is generally allowed *here* to be fairly written, but somewhat too diffuse and long-winded. I am glad to find that you think there is at least *one* Englishman able to do you justice, and willing withal.

I have just received a letter from the son of my old friend Professor Bailey of West Point. He is now a Professor in a New Brunswick College, and seems to wish to do every justice to his father's memory, by publishing his MSS., &c. It was a very nice letter, and it gave me great pleasure to receive it.

To Mrs. Alfred Gatty.

Winton Road, Feast of St. Paul, 1863.

Thank you very much for Dr. Vaughan's "The Book and the Life," which I had intended getting. I have as yet only read first and last sermons, which I thoroughly like. You mark a passage in the first to which *you* cannot give a full assent, but you judge rightly that it coincides with my views long held and adhered to, long before those latter-day doubts came into fashion. I do most thoroughly think that the revelation of matters of science was never designed, and implicitly as I should follow the revealed word in all its *doctrinal* teaching, if it told me a fact of science, such as that water on cooling to 40° becomes specifically lighter till the surface freezes, I should not believe it for the word's sake without experimental tests. Yet I do assuredly believe that that irregularity in the case of water, which we know is of such vital consequence to all creatures that live therein, was designed by an Allwise Forethinker—before water was—as a special means to effect a special end. I mention this familiar case just to show the repugnance of my mind to receive *any* science as a revelation, and, with Dr. Vaughan, I think it derogatory to the Almighty to suppose that He would reveal to man what man by searching can find out. I think it fairly proved by the cloudiness and endless contradictions, and the *dreamland* into which metaphysics (abstract) lead, that "man by searching cannot find out God," nor solve the moral problems that he finds in himself, and *therefore* these are, if anything be, the *proper* (and I think the *only* proper) subjects of a revelation. If we contrast the Bible with pretended revelations, we find that it steers clear of the attempts to teach scientific facts such as they (the Hindu books, and the old magical books of other nations) largely profess to do.

What Dr. V. says of the absurdity of foretelling a scientific "truth," which though accepted as a *truth* to-day may be proved to be a lie to-morrow, is very just. Science is always in progress; always polishing off old surfaces and bringing out new. In her eye nothing is final, her faith knows no repose, looks forward to no future rest. She cannot conceive either of a beginning or an end, neither hath she any goal conceivable

to our minds. She is the horse-leech's daughter that cries "give, give." She *needs* no "revelation," and would not trust in one if she had it. If a *perfect* revelation, it would be her death warrant; if an imperfect one, her *scorn*. You know how I have ever stood out against the geological apologies for Moses. The more that *science* gets footing among the clergy, the less will they feel inclined to accept the fancies of those apologistic harmonists. Such apologies will assuredly lead to defeat. An illustration which I heard to-day in church struck me at the moment as *apt* to our present topic. The preacher spoke of the ark being taken by the Philistines when the Levites had brought it to the battle upon assurance of victory, and he said this was because they had made an *improper appeal* to it. Now it struck me that the conduct of those Levites was parallel to that of the clergy when they bring forward the Bible to disprove a scientific *fact*, and as recent events have sufficiently shown, with the worst results to the cause of "the truth." Is not the Ark of God now in the hands of the Philistines? But I must not run on. Suffice it that I value your gift both for your sake and its own, and have no unpleasant drawbacks therewith.

. . . . . Here I take up your letter to answer, and find on the *first* page your wondering whether I shall like the passage on inspiration in the third sermon as much as you do. All I can say is, that I like it completely; it is just what I think, and expressed in admirable language. Dr. V.'s sermons have the *three* good points one commonly desires in a sermon—brevity, terseness, suggestiveness; besides having the three graces without which "whosoever liveth is counted dead;" but I am not going to begin afresh. It is high time to conclude, yea, time to go to prayers and bed. We went to the Cathedral to-day, expecting to hear Mendelssohn's "My God, look upon me," but instead of it the anthem was "Oh where shall wisdom be found," &c., quite apt to the first portion of this letter. And now farewell.

Yours affectionately,
W. H. H.

Is it possible that we never told you that we liked "Red Snow?" It has been more read and admired in our circle and amongst our friends than any of your Parables. Enid has read

it several times, and a friend of mine dare not read it aloud because it is so painfully touching that he could not command his voice.

Warren's Hotel, Kilkee, July 18, 1863.

We arrived here last night from Limerick. Our party consists of Mr. and Miss Ward, Mr. Snell, "Enid," and self = five. "Triandriadigynia" = the grasses, according to Linnæus. We get on very pleasantly, as all have pretty fair tempers, and are willing to yield in turn. Our united ages are 274 years, as well as I can count—but under correction from Bishop Colenso. Nevertheless, as is not often the case, the eldest is perhaps the greenest and freshest of the party. I need not say that I don't speak of myself. . . . This is a stupid scrawl, written on my knee at half light, but it goes to say we do not forget you, and that we hope you are on the mend since Mr. Paget came to the rescue.

Yours affectionately,
"THE 5TH PART OF 274."

To the Same.

3 Pery Square, Limerick, August 24, 1863.

I do not know whether there be such a word as "con-*sœur*" (though there be *connoisseur*, and perhaps that will do as well and be as appropriate), so, ma chère connoisseur, thank you for your letter of the 20th, and especially for the two cartes enclosed therein. Perhaps you had got Kingsley's notice before sitting; tell ——, though his praise may not be that of an *advanced* phycologist, still I should value it more than the criticism of the nameless one in the "Athenæum," who evidently knows less of what he is talking of. Have you not read the "Water Babies?" We are quite charmed with it. It is to me as a dream; *as one feels a dream one's self while dreaming.* Of course 'tis an allegory, but what is the interpretation thereof? I don't know that I am right, but I can see at least two meanings or under-springs of interpretation. If we take the *stream* into which Tom plunged when "he would be clean" for the waters of baptism, you may read the book with one set of interpretations, and 'twill do very nicely. If, on the other hand, Tom was *drowned* in the stream, why the

whole after book is a most charming "Romance of Purgatory," such as one would *wish* to be true. How like a *real* story it does seem, at least to me! . . . After all we are probably going to Switzerland instead of Jersey. I am still with *a throat*, which I can't get Enid to believe is to be a *fixture* for the future; she will think differently; hence the cause of our proposed travelling southward. And now farewell, which means "get better," and don't overdo your little strength as it returns.

To Mrs. Gray.

September 2nd, 1863.

. . . . Nothing you said in your letter in the least nettled me. I think it all natural, but having burned my fingers before in writing about what I cannot understand, I think it best to let matters be, trusting to the end being good. When at Killarney I stepped on what I thought was a beautiful green patch of moss, and in a moment I sank in black mud up beyond the knees, and only for a friendly tree I might have gone over ears and all. She that readeth, let her understand!

To a Cousin.

4 Winton Road, October 22nd, 1863.

We came home yesterday from our summer tour, which we greatly enjoyed, and I hope we are all the better for it. We were just a month out of England, going through France to Switzerland, and returning by Belgium. Weather mostly very pleasant, and when it failed us we fled. We spent some days at Kew with our friends there, and also at Clapham with Mr. Ward, and with Dr. and Mrs. Gray at the British Museum.

I thought Sir William Hooker much better than when I had last seen him, though a year older (in his seventy-ninth year), and he was as busy working at his ferns as ever. He is just finishing off the last volume of his "Sp. Filicum," and I think already beginning to nibble at another book, which he thinks it is a pity not to do as a coping stone. So we go on; but how few carry out untiring energies to the last of a long life! Here am I, having finished my Austral Algæ, congratulating myself that it is done, and having no desire whatever to enter on a new book of similar kind. Happy to close accounts! I admire,

however. Sir William's indomitable energy, for it is mixed with a full consciousness of the ebbing sands of life, and is in him more an earnest desire to do the day's work while it is called to-day, than indulging "a ruling passion strong in death." He knows that he has the best materials for such a work, besides having them more at his finger-ends, by long experience and study, than any living person, and therefore he thinks it his duty to give the public the benefit, to the utmost of his power. May he be spared to do so!

To Mrs. Alfred Gatty.

4 Winton Road, October 21st, 1863.

MY DEAR PARLATORE,

Thank you for the welcome home in your letter of yesterday, which came this morning after I had started for town. But, my dear friend, is it right and proper for you to scribble at this rate—six pages and crossing—all with your wrong hand? I have read Aunt Judy's last letter to Dr. Fisher, wherein she says you ought not to use that hand at all. And I assure you, much as I like to see your handwriting, I do not like to see it if I think it is doing you a mischief, wherefore do not write discursively, but, if need be, curtly, and I shall attribute it to prudence and compliance with doctor's orders. . . . .

When can I lay aside any time for working at the Manual? At present I have on my table for daylight work these:—1500 and odd species of Cape plants, to be named and stowed away. Item. Another parcel, 500 and odd, from Natal, ditto. Item. Another = 300 and odd, ditto, from Grahamstown. Item. Another = (half done), from Caffraria.

The above accumulated in my holiday, besides numerous smaller parcels, and almost every month brings its Cape parcel. And now I hear that next mail steamer will bring the Colonial Herbarium (I don't know how big) to be "verified" and put in order. Then after Christmas I have to draw lithographs, fifty for "Thesaurus," and no saying what else, and then the lectures come on in April, and then, and then, and then——

Trinity College, Dublin, November 3, 1863.

You ask about spiders' ears. They have eight eyes or more apiece, and ought to have ears, but I must ask our

zoologist. I am too rusty in my insect lore to give you a modern answer. . . . There were Algæ (vile Algæ) on my table, New Zealand beggars, lying forgotten for a twelvemonth, till recalled to mind by the sender, Dr. Lauder Lindsay. They are now named. Shall I send you what I don't want of them? Not very heavy.

Ever yours,
FLORA CAPENSIS.

N.B. What is the case, oh parser, of the signature? Do you give it up? or doth not the "yours" tell you that it must be vocative. To wit: "Oh Flora Capensis, I am ever yours!"

November, 1863.

MY VERY GOOD MADAME GATTI,

I had not time to read your "Spiders" yesterday till evening, when I read them in my study before dinner. I find nothing to object to in the natural history unless "eyes looking every way at once," and one other point. First, "eyes every way," can hardly be said of the fixed eyes on top of head only. But after all no one but a hyper-cross-stick will quarrel with it as it is. Second, Do spiders eat flies? "eat them up," as at p. 151. I thought they only sucked their juices, leaving the dry part of a carcass in the web. I may be wrong, but I think so: look. I know nothing about Horne, the author of the "Poor Artist," save that he was a popular writer some years ago, and has since gone to Australia. He published a poem called "Orion," and sold it for a farthing! . . . As to borrowing from Newman,[1] what does it signify? 'Tis quite impossible, truly, for every one to be at all times original. How can you help assimilating gradually what you read from year to year, and which blends with your own thoughts as sugar does with tea. As to your copying anything from me, I am too much flattered at your thinking it worth while to do so, so that I freely forgive you the robbery. . . . I am glad you are going to introduce scent. I had a thought of sending the Spider down a gaspipe, or into an escape of gas! but the white lilies are much better. She found

[1] Alluding to a passage from Newman, quoted by Dr. Harvey in his Seaside Book; something similar to which had been unintentionally written in "Inferior Animals."

them on the altar, I suppose? Does not the Parable end a little abruptly? Some few words to suggest "the Unseen Presence" would finish it off nicely. I think it is a very pretty little gossamer, however, as it stands.

(It need scarcely be said these delicate criticisms were attended to.)

To Miss Harvey, New York.

Trinity College, December 17th, 1863.

We are really very bad letter-writers, and getting worse and worse every day. It is not that we forget you, for I have distinct memory of many intentions to write, but somehow the days went by and nothing was done. We had our usual holiday of three months, a part of which we spent in France and Switzerland, where we had not been for some years. We just left home when the weather became stormy, and so prolonged our summer for a good five weeks, leaving Switzerland again just as the lower hills became white with snow, and the place began to look dreary. We then paid visits to some of our friends near London, staying a happy week at Kew.

Have you read the "Water Babies?" If not I think you will be glad to do so, and so I send a copy. I think it very clever, one of Kingsley's best things. There are multitudes of allusions, sarcastic and otherwise, to scientific facts and men, which perhaps may not be so clear to one not versed in the matters referred to, but I think you (as a Professor) will be able fully to appreciate the fun. You know the quarrel between Owen and Huxley about the Hippocampus minor (which Kingsley travesties as Hippopotamus major)? Then Professor Ptthmllnsprts (if you add vowels to the consonants you will find what words they spell). Then the history of the "Do as you likes," a charming episode of Darwinism, if you know what that means. We are going to-day to a performance of Handel's Messiah for one of our charities. I always go to hear it when I get a chance. It is music of which one never tires, and our Dublin choirs are well used to it. You know it was first performed in Dublin, a fact of which our folk are proud.

To Mrs. Gatty.

3 Pery Square, Limerick, January 22nd, 1861.

I see an excellent letter from "A. G." in last "Guardian" about free churches. I have always thought well of them, but I now see the evils to which they are open, and I agree that it would be much better to have seats for the poor with their families, and some free seats for strangers who might drop in. Enid says that in a country church she was used to in Wexford all the poor had their own seats just as well as the rich, and were not confined to the lowest seats, but were mixed up and down the church just as convenience settled it, some poor farmers at the very head, close under the pulpit, &c. This is what we want, equality of rank in the house of God, at the same time that families may go together, each one knowing beforehand where he is to sit. I thought A. G.'s words were right words. Another A. G. (Asa Gray) writes from Boston of a great bazaar which they had just triumphantly concluded in favour of the army hospitals, and what do you think they netted of profits for the charity? Only 140,000 dollars = 28,000*l.* or so! And that in a city of about 150,000 inhabitants. I call it very respectable.

To Dr. Gray.

Dublin, February 5th, 1864.

Your welcome letter of January 5 reached me in Limerick, where we went the day before Christmas to spend a few holidays, but where in three days after Mrs. H. was taken ill with low fever, from which, thank God, she is now recovered. . . . I have, on the whole, had about six weeks of enforced idleness from botany, and now that I return I find a multitude of parcels from South Africa have accumulated, awaiting my inspection. I have many correspondents in the Natal country and behind it who send me heaps of new things, some of them very curious. One new correspondent has sent a capital set, chiefly Asclepiads and Orchids, both very numerous families in that country, but also among them is a fine new *Anemone,* which must stand two or three feet high, with large flowers. In another bundle is a most singular genus of *Loranthacæ,* with the

perianth of *Loranthus* of bisexual flowers, but *linear adnate bifariously-mutilocellate* anthers, quite unlike anything I know, bearing out the adage, "Always something new and strange from Africa." . . .

I have thus run on with botanical matters, when I ought to ask for Mrs. G., whose illness I hope has resolved itself into a matter of history. . . . I am indeed grieved to hear of the sorrowful death of your favourite dog. Such catastrophes are very ruffling to the spirit—to say the least of it—so much so that I have abstained from indulging in petted animal friends. I remember, when at the Cape, feeling ashamed of being so deeply moved when my ostrich died that I forswore any similar entanglement, and have kept my vow. As to the after life of animals, that you speculate on, I see nothing against it—in analogy—and nothing for it in knowledge, and so it is with me, like most such questions, an open one on which I do not speculate. But this reminds me to ask have you read Kingsley's "Water Babies," first published in Macmillan, and lately as a separate book. If not, do read it, and I think you will be much amused, and on the whole pleased with it. We were charmed. It is the sweetest romance of purgatory that I ever read, and answers many a half-formed speculation that at various times has flitted across my fancy. Then the episode of "Do-as-you-like's," and the story of Madame Gairfowl are perfection in their way. . . .

I congratulate you on the prospect of having your Herbarium made permanent and self-supporting. It will greatly relieve you of weight, and cheer you with the hope that your labour will not die with you, but be useful to future generations. I should not have half the pleasure in my Herbarium if I thought it would be sold and dispersed, as I have in its being on the College foundation.

1 June, 1864.

My dear Mrs. Gatty,

. . . I do not know how cats purr, and am glad you asked ——, but I know that —— will purr very loud the next time he hears of Aunt Judy, about whose Dutch story he is very anxious, and fears she has given it up. . . .

Have you never felt a something stop your own windpipe when pleased or grieved, when suddenly affected either way?

'Tis the first gurgle of a purr; you were a cat once, away in the ages, and this is a part of the remains. . . .

But tell me, why does a dog when he is going to lie down before the fire always first make two complete turns, as if he was looking after his tail, before he is content to lie down? There's a poser for ——, but "Enid" shall give you a solution: "Because one good turn deserves another;" and if that be not a reason, I don't know what is.

It never occurred to me that there was a connection between Aunt Sally and the old doll, but perhaps there is. "There is a river in Macedon, and another in Monmouth, and salmon in both," which is a case in point. I did not think Mother Carey's doll was a doll, but a memory of something else, but I don't say what: as Kingsley says, there is lots without meaning at all, which I don't believe. He is talking parables from first to last, if ever man did, and if you don't catch his meaning, or a meaning from them, why should he explain? Don't wonder at his reticence, he would be perhaps convicted of heresy if he did, and his books put in the Index. But I still aver it is the most charming romance of purgatory ever written, and I would I were a Water Baby if I were a Tom, but not if I were an Ellie, But if I followed on this train, I know the powder-mill into which it would lead me; so instead of doing it I will say "good-night," and go to bed, intending to be up at my "*Senecio*"[1] (sweeping its chimney) by cock-crow.

W. H. H.

To Mrs. F.

Hôtel de l'Union, St. Servan,
September 12th, 1864.

I am sorry to say we shall be obliged to leave this resting-place in a week, which we greatly regret, as it has everything to recommend it for dawdling. I could stay here with pleasure a whole summer and write "Flora Capensis!" What more can be said? Our good landlady, Madame C., has much Irish heartiness, kindness, and cheerfulness; and thoughtfully ministers to us in little things, but is never intrusive. The housemaid and cook wear the curious old-fashioned head-dress of the country. On them it is very becoming, and so snowy white and stiff at all hours. Marie, the housemaid, has a radiant face, which looks as if she

[1] A genus of plants.

had begun the day with a blessing. She is always full of fun with her "Good-morning" to us: this salutation and the word "Yes" are the extent of her English vocabulary, but she makes good use of them. Constant sunshine seems to play about her, and she is at all times ready, quick, and obliging.

I may write to you from Vire after I have seen Lenormand, that I may tell you of the old man and his wife. He writes me that he "watches for me as the Jews do for Messiah."

September 19th. I do not find that I pick up my strength very fast, but shall probably get on better when forced to exert myself on my way home. We leave the day after to-morrow, and go to Vire to see Lenormand, and thence to Havre.

Your letter from Ballitore was very pleasant to me, and your recollections of early childhood most amusing. The old place is, I suppose, but little changed, though emptied of all that once made it a land of Goshen. Still the old walls in the keeping of "the last leaf," if I may so call your sister, must have many soothing associations.

I wonder how the river now looks from the garden wall! I remember making a sketch of it, the garden and the back of the house, from the field in front of the Retreat. Of course I have lots of recollections of all the nooks and corners, and though I was never much of a fisherman, I have assisted in setting night-lines for trout in the bank opposite your garden. This was soon after I came to school.

I am indeed rejoiced to hear the good report you give of your sister. Mind you give her an affectionate message from me. I have a sincere regard for her, both for her own sake and as the relict of my good old friend, who was so little appreciated in life, but so full of sterling qualities in the eyes of those who knew him well. I always connect his memory with the sixty-fifth Psalm, which is one of my prime favourites. Look at it in the Bible rather than in the Prayer Book. It first struck me several years ago, when I stepped, as I often did, into their house one morning on my way to College, and found him about to read the Bible. I was under great anxiety at the time for friends at sea, and the intense beauty of the fifth verse went to my heart; but the whole Psalm is soothing and strengthening, and he read it with such feeling and yet so simply. He had a very delicate ear for sweet sounds, and an equally fine taste in

composition. Many of my writings which got me praise, were carefully criticised and wonderfully improved by him.

We shall not be at all sorry to get to our own fireside. I am always as glad when the long vacation ends as when it begins, and this is as it should be. It shows one gets enough of play. We have been able to see but little of the many beauties of this neighbourhood, and Dinan, the gem of them all, we leave unvisited. Normandy and Brittany are very interesting districts, with a very primitive Celtic people. There are very many Druidical stones, some of great size, but we have seen none of them—all left for a second visit, which may never come.

To the Same.

Kew, October 6th, 1864.

We paid a very pleasant visit to Lenormand, but as I did not write about it at the time, I shall now leave it to talk over. We stay here till Saturday. The garden is fast putting on its autumn dress, but still there is much beauty remaining. The great new conservatory, which is much larger than the old palm house, is beautiful. It is filled with such half-hardy trees, shrubs, and plants, as need only a winter protection, and many are now coming into flower. Already there are gum-trees and acacias in full bloom; the smell of the latter like meadow sweet. There is a gallery round the house, near the top, and the view looking down on the trees, &c., most charming. All are planted without pots or tubs in open borders, with walks between. The part which is finished has cost some 50,000*l.*, and there are to be two more wings added. Sir William remarkably well, much better than last year, and as untiringly busy and energetic as ever.

I have not been indifferent to your trouble. It is a miserable break into a life that seemed opening with so much happiness. I am glad you have cheerful accounts of M. May she go on "from strength to strength," as her sterling self deserves!

To Mrs. Harvey of New York.

4 Winton Road, Dublin, November 24, 1864.

Your very welsome letter of the 7th reached me the day before yesterday, and I answer it "while the iron is hot," lest if I defer I may procrastinate too long. . . .

In May I contracted a troublesome cough, which I have not been able to shake off, and as country air seemed the best medicine, the first week in July we set off for the County Wicklow, accompanied by Dr. and Mrs. Hooker of Kew, with whom we spent a very pleasant time among its picturesque lakes and mountains. I had not been there for twenty-five years at the least. Our head-quarters were at the Seven Churches, "by that lake whose gloomy shore," &c., where, finding a comfortable inn, we made excursions on cars from it in all directions. The weather was superb, splendid sunshine and blue skies, such as we don't often have, even in summer.

When our friends left us, we went on to Limerick and County Tipperary, and in August returned to Dublin, intending to finish the summer in the Highlands of Scotland, but my cough being rather worse than better, Dr. S—— sent us to Normandy for warm dry air and general change. Thither we of course set off, going *viâ* Jersey, where we stayed a few days, and then went on to St. Malo, where we landed 26th August. Here we crossed the harbour to St. Servan, where we found a comfortable boarding-house. St. Servan is much like any other French country town of the old school. It is close to the sea, and has pleasant suburbs within easy distances. When we got there the climate was most delicious—clear air, warm sun, and pleasant sea breezes; and we should have seen much of the vicinage but that I fell ill, and was left too weak to do much more than crawl about before the summer was gone and the blustery weather coming. So towards the end of September we set out homewards, and during the ten days it took us to reach Southampton we had most lovely weather, for which great blessing I hope we felt thankful.

The country as we passed through Normandy and Brittany was very pretty and picturesque, and the fine old towns very quaint and interesting. Our route lay by Dol, Avranches, Vire, and Caen, to Havre. We rested two days at Vire, a quaint old place. I have a botanical friend, M. Lenormand, living near it, and though correspondents of upwards of twenty years' standing, we had never met. We found him a most delightful, middle-aged man, and spent our time very happily with him. He seemed as if he could not make half enough of us. I never met so cordial, and at the same time so thoroughly

simple a reception from a Frenchman. He has a nice old house and old-fashioned garden, and he and his wife, who is an invalid, live on their income in quiet happiness. It is a very primitive spot; no rail yet to it. We got to his house by a narrow country road, just broad enough for our wheels, and so full of holes and rough places that it was an agony to be driven over it. But the end repaid our trouble. His whole time seems to be spent among his plants, and he has a herbarium that almost fills his house, leaving only three or four rooms for the family. From Vire we had a long day's journey to Caen, the old capital of Normandy, where William and Matilda were buried, each in the chancel of a noble church. The churches remain, but the tombs have been broken, and the bones scattered. Caen is full of quaint old buildings, besides the fine Gothic churches. Now my travels are over; for we went to Havre by steam, and then to Southampton and London, and so on to Kew, where we spent a fortnight with Sir William and Lady Hooker most pleasantly; then to Dublin, arriving 14th October.

Your residence at West Point must have been most pleasant in that lovely scenery. I remember it well, and to me it is specially dear for the sake of my poor friend Bailey. That beautiful river and the white-sailed boats I cannot easily forget.

You touch upon politics in your letter, and I doubt not you live in a political atmosphere, and think me very strange when I tell you I have long ceased to read the newspaper account of your sad, sad war. "My soul is sick with every day's report," &c. Such vast waste of life for so little result. If Lincoln's election is likely to bring you peace, then I heartily congratulate you on it; but I cannot say I have much faith in my "if." But may God grant it to you in His own good time! Amen. Though often silent for a long time, I am not forgetful.

CHAPTER XVIII.

CONCLUSION.

The winter of 1864-65 passed over without any apparent change for the worse in Dr. Harvey's health, but the cold winds of spring, always so trying to invalids, and peculiarly felt in Dublin, seemed to accelerate the progress of the disease. The unfavourable symptoms increased, and his physicians again recommended a warmer climate. Arcachon, on the south-west coast of France, was the place decided upon, on account of the supposed beneficial effect of the aroma of its pine forests.

To Mr. T.

Arcachon, Gironde, March 16th, 1865.

We reached this place yesterday morning from Paris, having travelled (chiefly by night) thirteen hours, and getting here at ten A.M. We had a stoppage of an hour at Bordeaux Station, and so we arrived tolerably fresh at our lodgings. We were hardly arrived when Mrs. G. sent in her servant with a *hot-pot* of delicious English tea, and bread and butter, and she has continued her kindness in every possible way. We are most grateful to her, a perfect stranger to us save by her husband's introduction. You will want to know about the place. Well, it is in fine weather to all, and in all weathers to *some*, a most charming place—very picturesque, much more varied in level than I had anticipated, and the pines not at all sombre. They are of all ages, but few large. There is a village where we, the humble-minded, are housed; and there are villas of all shapes and sizes for the rich, here and there, through what is called the forest—a very open one. The undergrowth is chiefly arbutus, now in fruit. Houses painted all colours of the rainbow, and many are of fantastic shapes.

To Mrs. F.

March 24th, 1865.

You would be amused at what we call "a wind" here. Any breath that stirs a leaf or does but move the little twigs of the pine-tops we regard with suspicion, and seek to guard against; and to hear people talk, you would think it was really blowing. We keep as much as possible in the perfectly still places where the sun shines.

No perfume yet from the pines, nor will it come till the really hot weather, which we are told to expect next month. March last year was quite hot. Our friends lend us books, and books are an important item in a place where the whole daily "duty of man" seems to be to walk up and down till you are tired, and then to rest, and begin again. There is nothing else to be done here, and the botany is of the simplest. Very few flowers of any kind; the chief are chickweed, daisy, dandelion, and groundsel; not a primrose, not a violet (even a "dog" one) to be seen. We had a search for some clover leaves to make a shamrock, but after wearing it in our hats we found out we had *mistaken* the day, and kept it on the 18th! The gardens as yet make but little show; peach-trees are in blossom, and lilac beginning to expand its panicles and unfold its leaves. The *Forsythea* in some gardens beautifully covered with blossoms, and also the Chinese magnolia, that blooms before the leaves. People don't seem to care for spring bulbs; not a crocus to be seen. The public gardens, being intended for the delight of summer visitors, are still covered with straw. I expect they will be gay, as there are a great many frames full of bedding-out plants. And now I think I have exhausted all my local news.

April 26th. We took a charming drive to La Teste, a village about three miles distant, at the head of the bay. The road very pretty, bordered with deciduous trees, which are just in their newest and freshest green dress, and these backed by dark pines, under which the large yellow broom was profusely in blossom. Then, after a while, the road opened at one side, to the broad harbour, and we had meadows (rare things here) on the other side, and the sun shone, and the fresh but gentle breeze blew, and we went gaily along. Yesterday I took the

longest *walk* I have yet taken, and was not the worse for it. Every one says I am much better, and what "on dit" must be true. I think so myself, particularly the last week.

May 16th. For the last fortnight we have had rain and cool, but not cold weather, which I have enjoyed more than the drought and heat that preceded it, my cough being always worse of a dry than of a damp day. Few English now remain, and I hope we shall not stay much longer, for we are heartily tired of the place, and should the heat return, shall go to Biarritz, which, though farther south, is more bracing—always a fresh sea-breeze, being, like Miltown, on the open Atlantic. The cliffs are not high, but are, like Ballybunion, full of caves and crannies and shady nooks, and there are seats and walks cut in the rocks for faint and weary people. I wish we were fairly settled there. The distance is only four hours by rail. It grieved me to read in the "Times" of the death of good, kind, large-hearted Henry Christy, of whose illness I had not heard. Only a few days before, we had read the account of his presents to the R. I. Academy, and only a month ago he was chosen a F.R.S. Poor fellow! A very wide circle of friends, scientific and otherwise, will mourn his loss. His elder brother William was my first intimate friend of the family, and when he died, Henry took me up, and we have been friends for more than twenty years. I was seven weeks here before I smelled the pines, and then in a few days I smelled them no more. I think the whole pine theory humbug and bosh, and so I find most people here do. I believe that our grandmothers who went to Mallow and Cove were quite as well off, and far more comfortable than those who come hither.

June 5th. The summer seems passing very slowly. I can hardly think it is only the beginning of June, for we have the white jasmine in full flower, and French beans at dinner. We have had green peas since the beginning of May, and new potatoes for some weeks. Strawberries are very abundant and fine. I had rather be turning my head homewards than going southward, but I don't think we shall stay more than a month at Biarritz, and then I hope to move northward again, and perhaps visit St. Servan. It is over 500 miles from Biarritz, but there is rail the whole way.

I have been drinking the "Seve du Pin" for the last fort-

night, and still think it a humbug and very dear at twopence per bottle. But it is at least harmless. I think of trying tar-water when I go home; probably a much better thing. I believe my throat is a confirmed ailment, to be better or worse from time to time, but to stick to me for the rest of my days. May we be content therewith!

Biarritz, June 21st.

We continue to like this place. Only two days as yet so hot that we did not care to go out. On every other day, though bright and shadeless (save for our umbrellas), a delicious sea air, never amounting to wind, fanned our cheeks, and set the leaves of the plane-trees in tune, which make a noise like that of rain rustling on foliage—not unpleasant.

Last Sunday was held the fête of Corpus Christi (fête Dieu), and the streets through which the procession passed were strewed with green flaggers and ferns, and all the houses hung out white sheets; but this is all we saw, for the procession went by while we were in church.

To Mrs. F.

Cambo, Basse Pyrenees, July 15th, 1865.

Notice, my lady, that we have this day shifted our quarters, on the feast of St. Swithin (roasting hot), from Biarritz to this sequestered valley, lying inland some fifteen or eighteen miles, and fixed ourselves at the above hotel. Now please direct to the hotel, for the village post-office is some two miles distant from our lodging, and uphill most of the way, so that probably your letter "poste restante" would rest till the waking of the Seven Sleepers. We were just five weeks and one day at Biarritz, when, as ill-luck would have it, we hired a carriage for a day's drive to Cambo and the "Pas de Roland," which was reported worth seeing. Alas! the day was lovely, bright and warm, and breezy, and not hot, and everything looked its best. We had a comfortable open carriage, and a strong lively pair of horses, and a civil driver, all of which, joined to a very charming and diversified country, had such an effect on me, that I was quite tired of Biarritz next day, and so we settled to come here for "change of air" anon. What is Cambo like? There is a broad, deep, well-wooded valley, flanked by mountains, which

surround it, but it opens much soon after it passes the hotel. A broad but shallow river, which chatters over stones day and night, and sounds and looks so fresh and cool. There are baths and drinking fountains. These last are of two kinds; one iron, the other "rotten eggs" (sulphuretted hydrogen). I am going to drink the latter, but have not yet begun; it is "bien délicieuse," you may suppose, and cost a penny per day, for which sum you may drink till you are drunk, or all day long.

The place is seclusion itself; the only noise we hear in our rooms is the river, and in the woods the cicada, and the tinkling cow and sheep bells. We are told there is no dew, and that we may stay out till ten at night, and that it is delightful to do so. At Biarritz we "shut up" at sundown, on account of the very heavy dews, and frequently had to lie by three or four hours in the day for the heat. If we had plenty of books, which we have not, we could stay here for a long while, but I have Shakespeare to read, and the Bible, so I am not quite dry.

I cannot conceive a sound mind holding conversations with the dead, or getting messages from them to deliver, but I do think some may be favoured with an ideal communion with the departed, in which the presence of those we have lost seems to hover about us, but without words—an innate vision of a spirit, and a "silence" such as we read of in Job. I know our thoughts do so dwell with them at times, as to bring forth in profusion painless tears, but it may be only our own consciousness, and the blessed may not know of it at all. The Church encourages us (on Ascension-day) to endeavour "in heart and mind" to ascend with our Lord (with whom are our lost treasures), "and with Him continually dwell," and may not He in His infinite love and power, be the medium of a spiritual communion between them and us, even as He makes Himself also "one" with those who partake of His flesh and blood? I cannot divest myself of such hope as this, be it sound or foolish.

August 4th. We leave this place to-morrow, 5th August, and our next location we expect will be St. Servan. All the country is beautifully green, and mushrooms and fungi flourish; —the weather has broken, and it is just as it might be at Killarney. They eat queer funguses here—did you ever see them in woods? with a yellow, sponge-looking, pin-holed thing under the cap, instead of gills. They are called *Boletus* by

botanists. Well, we have learned to eat them: they make a rich stew, with a not unpleasant but weak mushroom flavour. In want of better they are palatable enough. The French don't eat our English mushroom, though it is common enough in the fields. Poor ignorant creatures!

St. Servan, August 16th.

Your letter reached me a few days ago, but I had no spirit to write. I did not hear of poor Sir William Hooker's illness till many days after he had been laid in earth. I have written to Kew, but they did not know where we were—hence the silence. His illness was very short, only of three days' duration—taken ill on Wednesday, and dying on Saturday afternoon. It was an affection of the throat, which it appears had been for some weeks endemical at Kew. To me it seems as if I could scarcely yet realise his death, so soon has he gone from full activity and energy of mind, as shown in the last letter I had from him some six weeks since. It was written with all the old vigour as of twenty years ago.

We shall never see his like again. I never knew his equal in many invaluable qualities. He deserved all the credit of making the "Museum" of vegetable objects—the first of the kind established, and by far the finest to be seen anywhere. I remember its early beginnings, in some old drawers, and now it fills three large separate buildings, and will require more room if it be kept up with his energy. The great secret of his success was that he deemed nothing too small for his notice, if it illustrated any fact in science or economy, and nothing too difficult to be attempted in furthering the collections. And with all his out-door labours, taking several hours a day, and his very large correspondence with all parts of the world, kept up to the last; few men have published more in their time than he has. Latterly his books were written after eight o'clock at night, and he generally worked till near midnight. He leaves a work on Ferns unfinished, which he began about a year ago, and was busy upon, up to the very last few days. Green indeed and full of love and honour was his old age, and he sank peacefully at last without much protracted suffering, and full of hope. "Let me die the death of the righteous, and my last end be like his."

I am not in mind to write of anything else. You ask for my health. I have nothing new to say. I suppose I am better, but easily tired and puffed, and sometimes with a throat.

To Miss Harvey, New York.

4 Winton Road, Dublin, November 23rd, 1865.

Some long time ago you wrote me about the Greek service held at your Trinity Church, and asked me to say what I thought of it. I am no theologian, but, like many persons in the present day, I should rejoice to see Christians of all denominations united so far as to be able to worship together, still allowing to every man his liberty of conscience in smaller matters. There is a prayer in our book (not in yours I believe) in the office for the Queen's Accession (20th of June) called "a prayer for unity." If you can get an English prayer-book just look at it. We are so fond of it that we read it every Sunday morning in our family prayers. It is a *golden* prayer, and so beautiful, you will love it also and perhaps use it. As to the Greek Church, you know that the only *essential* difference between her doctrine and that of our own Church is in an article of the Creed—the procession of the Holy Ghost, which *she* declares is "from the Father," *we* from the "Father and the Son." Is this a cause sufficient to break the unity of the Church? Nine-tenths or more of the clergy, and a vast majority of the laity, would probably say it is; and if it be, it is irreconcilable, the Eastern and Western Churches are severed for ever. So they are, so long as the present dogmatic symbols are retained. But I trust and pray that a day may come when men may see that doctrines which are far above the grasp of the highest human mind are unfit to be made tests of orthodoxy or badges of a party. To fight for the Western view of the doctrine appears to us to be clearly taught in Scripture. It does not appear to be so taught to the Eastern mind. Each Church regards its opinion with equal reverence; each seeks equally to honour God in the view she takes. Who shall judge between them? Is it a subject which it is absolutely necessary to form an opinion on, on pain of rejection at the last day? I cannot think it is, nor do I think that either party (Western or Eastern) can with all their learning and skill, get beyond the mere outer shell or husk of the doctrine. It involves

anatomical dissection of the Trinity, such as no sane or reverent man would attempt, and which would lead to nothing but a quarrel about words. On such matters it is better to use the reticence commended by St. Paul, of the man who "heard *unspeakable* things, such as it is not lawful for a man to utter;" and till we shall be "caught up" like him into the third heaven, though we may utter words to no end in our attempts to make plain these *unspeakable* things, we shall not understand them. They are "incomprehensible" in the highest sense of that word. Wherefore in conclusion I could wish to see the day come, when Christians would be willing to return to the simplicity of the Apostles' Creed, and not require of communicants any more abstruse dogmatic symbol. So, I say, I hope Greek and English will eventually agree to differ without dissent or breach of communion.

Winton Road, Dublin, 10th March, 1866.

My dear Mrs. Alison,

Last evening's post brought me the Jersey newspaper, containing the sad, sad news from Bogota—news so completely unexpected that it has shocked us both very much. You looked forward so cheerfully in your last letter to his winter voyage, and it seemed so very desirable at the time, that the shock is the greater. We do indeed most sincerely sympathize with you, and pray that you may be supported in this greatest of all trials by the Divine arm, which alone can bring resignation under every affliction. At present you will hardly realize the full extent of your loss. The stunning effects of a sudden bereavement I know well, and that it is only day by day, as time goes on, that the survivor feels the full stroke. But at the same time the spirit is more subdued, and more prepared to receive the consolation that God provides for all his dependent ones, and the cry is uttered, "Whom have I in heaven but Thee, and there is none on the earth that I desire in comparison of Thee—Thy will be done." May God, my dear friend, be your support and stay now and for evermore! . . . Mrs. Harvey joins me in love to you and G., and we both feel for you from the bottom of our hearts. God bless and comfort you, and make His face to shine upon you!

Your affectionate friend,
W. H. Harvey.

During the winter of 1865–66 Dr. Harvey's health appeared much the same as in the two previous seasons. In February, however, hæmorrhage, returned, which was succeeded by increased debility, and Dr. S. advised that the remainder of the spring should be passed at Torquay, to which the invalid willingly assented, and the more readily that Lady Hooker was then residing there, which gave pleasure to the prospect. The voyage to Plymouth, though undertaken as the easiest route, proved very fatiguing, and he arrived at Torquay much exhausted. Here he was met by his kind friend, whose affectionate welcome acted as a temporary revival, and in whose house he and Mrs. Harvey took up their abode. He writes April 12th to the editor: "Don't be vexed with me if I say very little, or if I do not write at all, for I am still feeble and sore broken, though I hope on the whole better. To-day I had at dinner such a delicious bunch of water-cresses, the first I had this year, and I so enjoyed them! What a child I am!"

To Mrs. Alison.

6, Matlock Terrace, Torquay, April 17th, 1866.

My dear Mrs. Alison,

Your letter of 7th only reached me last evening, and although not allowed to write much (for I am very weak, and soon tired), I *must* send you a few lines to say how grateful I feel to you for having written to me so soon, and also for *the letter*, and F. Field's beautiful lines.

I have been thinking of you continually since I got the paper, and I had lately almost made up my mind to write to G., and beg her to tell me how you were. The letter from Bogota indeed is most consoling in every way, but how I pitied the dear man in his long mule journey, when in so weakly a state! Oh, it is painful to think on! but God was with him throughout and to the last; and 'tis He alone "that makes our bed in sickness." I love to think on his beautiful character through life, and the peacefulness of his death. I am now seventeen days here, but do not yet recover strength. Indeed I am weaker, and I think still thinner than when I left home. No *bleeding*, but *wasting*. My face is the only unemaciated part. We are here with my dear old friend Lady Hooker, and her daughter and son-in-law,

Mrs. and Dr. Lombe. Dr. Lombe is very skilful, and unremittingly kind; and when I am able to get out I hope my strength may improve. At present a walk across the room, or from one room to another, is about enough for me.

Mrs. Harvey sends her love—you know you have her sympathy. "God be your hope and strength!" and farewell.

Yours affectionately.

To Mrs. F——r.

Torquay, April 26th, 1866.

I am very much weaker and thinner than when I left Dublin—my pulse at an average of 120—and I am told nearly the whole of my left lung is congested. . . . .

So much for my outward man. As to my real self, though often languid and good for nothing, on the whole I am cheerful, and enjoy reading of various kinds. I know very well that I am in a critical state of health, much more so than I supposed before we left home. But I also know and can trust Him in whose hands my life is, and who has followed me with most merciful forbearance during the whole course of my life. I endeavour after a full submission to His will, and pray that sooner or later He may take me to Himself, and that I may "stand in my lot at the end of the days" united to those who are gone before, who are so often in my thoughts. But for dear L.'s sake, I could die here as peacefully as at home. It never appeared to me to be of *any* consequence where we die, or where we are laid. The world is a mere speck in the universe. This day at sunset, thirty years ago, we committed dear Joseph's body to the deep, "till the sea shall give up her dead!" I have *always* had a strong repugnance to carrying bodies to *distant* burial-places.

Where the tree falls, there let it lie! . . . .

Don't think I am out of spirits—those things don't agitate me in the least.

I could not but feel thankful to hear that dear S. W. had entered into her rest—every troubled thought forgotten, and her spirit freed from every entanglement. . . . . How tenderly she waited on us in sickness at school—when I had both measles and scarlatina, and when I was laid up by a scythe-cut across my instep, which I gave myself while George O'Connor was

teaching me to mow! He had to carry me home on his back, and when he deposited me on a chair in the kitchen to have the wound dressed, I said, "Poor I!" and then fainted. This became quite a joke with S. and me. She of course was standing by ready to commence operations.

Torquay, 4th May, 1866.

[Mrs. Harvey writes.] "My dear one is perfectly happy and resigned. All is peace with him, and at times he is just his dear old self—playful and cheerful. It is sad to be so far from home, and you all; but I trust I do not murmur, and he says always that he is quite satisfied that he came. Mr. Harris, the clergyman here, came to-day and administered the sacrament. Dear William had to lie in bed, and Lady H. and Mrs. L. joined us. It was, I trust, a refreshing season to us all; it was a solemn and comforting time, and dear William did not seem fatigued by it. . . . .

"This is indeed a time of deep trial; but to witness his peace and joy in the Lord his Saviour is a blessing, a balm, and comfort to my wounded spirit that I feel unable to put in words."

To Dr. Fisher.

Torquay, Matlock Terrace, 14th May, 1866.

My dear Thomas,

I am now wholly confined to bed by weakness, and unequal to dictate much, but I wish to thank you for your very affectionate little note. I always thought that I was the gainer by your society, and little supposed I had helped you on your way: it is very gratifying to me to hear from you that this has been the case, for you are too honest to flatter. I do not think that I shall last very much longer. I pray to be preserved in the waiting spirit, which has hitherto supported me. I am thankful to be spared acute pain, and the Lord has been very gracious in preserving my mind calm and clear. I can trust Him to the end. You need not send the "Guardian" any more. I am able to read very little now, or even to listen to much at a time.

My affection for you has never abated, and I trust will follow me to a better world. Farewell now, my dear Thomas, with dear love to L.

Yours very affectionately,

(In pencil, signed faintly) W. H. Harvey.

Written by his wife to Dr. Fisher, enclosing above:—

. . . . "Many times before, and this morning, he spoke such beautiful words of resignation, and words of comfort to me. He prayed that he might await the Lord's time with patience. He thanked God for his many mercies to him, and said His love and goodness had followed him all the days of his life in this pleasant world. Yes, he said, it had been a pleasant world to him. The Lord has been very gracious to him and us. His mind so calm and clear, and such lively faith and hope in the merits of his precious Saviour. Even to the last he is thinking of others. You will see, though very faint, his dear signature at the end of your letter."

It was thus the pure spirit cast off its shroud of mortality, and peacefully passed away. Fondly watched over by his wife and nephew, he closed his gentle eyes and fell asleep, on the 15th May, 1866.

By his own desire his remains are laid in the cemetery at Torquay.

Dr. Harvey's friend of many years, Mr. Ward, visited him in those dying hours, and many months after he thus wrote of that visit: "I had the great privilege of spending a day with him shortly before his departure, and in all my long experience I never saw a countenance more illumined by that 'peace of God which passeth all understanding,' and this heavenly state continued to the close of his existence. May our last end be like his!"

THE END.

The design of this volume would be incomplete if no more satisfactory information was to be found respecting Dr. Harvey's published works than what may be gathered from his letters. A list, exclusive of his smaller papers, is therefore presented on the concluding page.

Genera of South African plants; published at the Cape, 1838. A new edition, edited by Dr. J. D. Hooker, has just appeared, 1868.

Manual of British Algæ; published in 1841; re-edited in 1849.

Phycologia Britannica: a History of British Seaweeds, containing coloured figures of all the species inhabiting the shores of the British Islands; begun in January, 1846, and completed in 1851, in four vols., with 360 plates, all drawn on stone by Dr. Harvey's own hand.

Nereis Australis, or Algæ of the Southern Ocean; begun in 1847, but carried only to fifty plates of selected and beautiful species.

The Sea-side Book; published in 1849, and which has passed through several editions.

Nereis Boreali Americana, or Contributions to the History of the Marine Algæ of North America, but with figures only of the leading species—issued in three Parts: First Part, *Melanospermeæ,* in 1852, in the third vol. of the Smithsonian Contributions to Knowledge; Part Second, *Rhodospermeæ,* in the fifth vol.; Part Three, *Chlorospermeæ,* in the tenth vol. of the series, published in 1858. The three Parts collected compose a thick imperial quarto vol.; 550 pages of letter-press and 50 plates.

Phycologia Australica; begun in 1858 and concluded in 1863, in five imperial octavo vols., having each sixty coloured plates.

Thesaurus Capensis, or Illustrations of the South African Flora, comprising 200 plates of interesting Phænogamous plants.

Flora Capensis, being a full systematic account of all the plants of the Cape Colony, including those of Caffraria and Natal. In this work Dr. Harvey was associated with Dr. Sonder of Hamburg. Three vols. only have appeared; the last in 1865, which includes the *Compositæ*.

In 1862 Dr. Harvey prepared for publication—

Charles and Josiah, or Friendly Conversations between a Churchman and a Quaker, written some years previously.

LONDON: PRINTED BY W. CLOWES AND SONS, STAMFORD STREET,
AND CHARING CROSS.

1/-

45564

SMITHSONIAN INSTITUTION LIBRARIES
3 9088 00899 9260